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IN THE

Supreme Court of the United States

BAYER AG and BAYER CORPORATION,

Petitioners,

v.

ELAN PHARMACEUTICAL RESEARCH CORPORATION and ELAN CORPORATION, PLC,

Respondents.

ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

PETITION FOR A WRIT OF CERTIORARI

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QUESTIONS PRESENTED FOR REVIEW

Does a determination of patent infringement based on what an Abbreviated New Drug Application ("ANDA") applicant will likely market if its application is approved, rather than on the product for which the ANDA was submitted, violate Article III of the Constitution?

Does a determination of patent infringement based on what an ANDA applicant will likely market if its application is approved, rather than on the product for which the ANDA was submitted, exceed the clear language and intent of 35 U.S.C. § 271(e)(2)(A), which provides that only the act of submitting the ANDA itself constitutes an infringement?

STATEMENT PURSUANT TO RULE 29.6

Bayer Corporation is a wholly owned subsidiary of Bayer AG. Bayer AG has no parent corporation and no publicly held company owns 10% or more of its stock.

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OPINIONS BELOW

The Federal Circuit's decision for which review is sought is reported at 212 F.3d 1241 and is reproduced in Appendix A. The decision of the U.S. District Court for the Northern District of Georgia, which the Federal Circuit affirmed, is reported at 64 F. Supp. 2d 1295 and is reproduced in Appendix B.

STATEMENT OF JURISDICTION

On May 12, 2000, the Federal Circuit entered its judgment affirming the decision of the U.S. District Court for the Northern District of Georgia against the petitioners. By order entered June 22, 2000, the Federal Circuit denied the petitioners' request for panel rehearing and rehearing *en banc*. App. C. This petition is filed within ninety days of entry of the June 22 order. This Court has jurisdiction under 28 U.S.C. § 1254(1).

CONSTITUTIONAL AND STATUTORY PROVISIONS INVOLVED

U.S. Const. Art. III, § 2, cl. 1.

35 U.S.C. § 271(e)(1)-(2)

21 U.S.C. § 355(j)(2)(A)-(B)

The relevant provisions are reproduced in the Appendix to this petition. App. D.

STATEMENT OF THE CASE

A. The Nature of the Case and the Importance of the Issues Presented for Review

In this case, the Court is presented with the occasion to resolve the scope of federal judicial authority to adjudicate whether prospective generic copies of patented pioneer drugs may be approved for marketing in the United States. The questions before the Court center on when and under what standards Article III courts may assess whether prospective generic drugs are encompassed by patent rights covering pioneer drugs to which Abbreviated New Drug Applications ("ANDAs") are directed. The answers to these questions involve the interplay between statutes and FDA rules governing ANDAs and those governing patent infringement claims directed to ANDA products.

The basic statutory law in this area — the Hatch-Waxman Act — has been catapulted into the forefront of public interest by the rapid increase in numbers and types of generic drugs, and litigation pertaining to them. Information obtained from a 1998 Congressional Budget Office study indicates that generic drugs comprise over 43 percent of prescription drugs sold in the United States, up from only 19 percent in 1984.[1] In 1998 alone, 345 ANDAs were filed and 225 were approved.[2] Given the simultaneous increase

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1. Congressional Budget Office, *How Increased Competition from Generic Drugs has Affected Prices and Returns in the Pharmaceutical Industry* at *ix* (July 1998).

2. Nasser Mahmud, *186 Generic Drugs, 43 First Time; 56 Tentative Approvals, News along the Pike*, Vol. 6, Issue 2 (F.D.A., Center for Drug Evaluation and Research) (February 2000).

in the amount of research and development made by research-based pharmaceutical firms and the number of patents issued relating to new drugs, more litigation is inevitable.[3] Because of the complexity of these types of controversies, and the extremely valuable nature of the rights involved, federal courts have become increasingly consumed in these disputes. It is therefore critical that the rules of engagement are certain and the responsibilities of the federal courts are plainly articulated. The efficient administration of the Hatch-Waxman Act and the role of federal courts in this statutory scheme depend on this delineation.

In this case, the Court of Appeals ruled that submission to the FDA of an original ANDA seeking approval for an infringing drug product that included samples (the "biobatch") upon which the ANDA applicant was basing its claims of bioequivalence was irrelevant under 35 U.S.C. § 271(e)(2) because later, amended specifications submitted by the applicant defined the product the applicant "will likely

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3. For example, according to statistics obtained by the Pharmaceutical Research and Manufacturers of America ("PhRMA"), it is estimated that over $26 billion will be spent on research and development of new drugs this year. Pharmaceutical Research and Manufacturers of America, *Why Do Prescription Drugs Cost So Much . . . and Other Questions About Your Medicines* at 14 (June 2000). R&D spending by research-based pharmaceutical firms has more than tripled in the last ten years. *Id.* at 15. A June 2000 publication of PhRMA indicates that: (1) of every 5,000 medicines tested, on average, only five are tested in clinical trials and only one of those is ultimately approved for patient use; (2) the average cost of bringing one new medicine to market is $500 million dollars; (3) it takes an average of 12 to 15 years to discover and develop a new medicine; and (4) on average, only three of every ten prescription drugs available to treat Americans generate revenues that meet or exceed average R&D costs. *Id.* at 2-3.

market," a product different from the original ANDA. The District Court granted summary judgment to the generic manufacturer, basing its inquiry on amended ANDA specifications under which no actual drug product had been made. The Court of Appeals affirmed this decision, even though it characterized the District Court's inquiry as "hypothetical". In so ruling, the Court of Appeals rendered a mere advisory opinion on a hypothetical dispute in violation of the Case or Controversy clause of Article III of the Federal Constitution.

To avoid this impermissible practice — and the inequitable results that it makes possible — 35 U.S.C. § 271(e)(2)(A) must be strictly limited to the act of filing the ANDA. Any resulting infringement action must proceed on the basis of the ANDA *as filed*, that is, on the original ANDA application, the required patent certification and the biobatch samples of the prospective generic drug.[4] If the ANDA applicant wishes to have the infringement action proceed on a different product, it should submit a new ANDA or a new patent certification. Either the new ANDA with its new patent certification or the new certification alone would define a new act of infringement under 35 U.S.C. § 271(e)(2)(A), thereby creating a statutorily authorized case or controversy for purposes of initiating an infringement action by the patent owner. The requirement of a new ANDA

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4. The patent certification itself also directs the infringement inquiry to the ANDA as submitted:

> that such patent is invalid or will not be infringed by the manufacture, use, or sale of the new drug *for which the application is submitted*

21 U.S.C.A. § 355(j)(2)(A)(vii)(IV) (West 1999) (emphasis added).

submission or new certification would comport not only with the explicit definition of infringement in 35 U.S.C. § 271(e)(2) as the act of submitting an ANDA, but also with Article III.

This construction would protect the rights of patent holders and of other ANDA applicants by avoiding the anomaly that occurred in this case. Here, the generic drug manufacturer used an assertedly infringing drug product for its pivotal bioequivalence studies on which its ANDA was based. The ANDA applicant submitted these bioequivalence studies together with samples of the infringing biobatch drug tablets with its original ANDA. In accordance with the provisions of the Hatch-Waxman Act, this first ANDA applicant obtained exclusive marketing priority over later ANDA applicants. The ANDA applicant was then permitted to change the drug specifications after FDA submission of its original ANDA *and after the initiation of the infringement action based on the original submission*. Although the ANDA applicant established bioequivalency with an infringing product and obtained valuable exclusivity rights based on its original ANDA filing date, it later obtained ANDA approval on a different product, a product that it had never made prior to the grant of summary judgment.

B. The ANDA Process

The Hatch-Waxman Act amended the Federal Food, Drug and Cosmetic Act[5] and the patent laws[6] for the purpose of facilitating the development of generic drugs while

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5. Pub. L. No. 52-675, 52 Stat. 1040 (1938) (codified as amended at 21 U.S.C. §§ 301 *et seq.* (West 1999) (the "FDCA").

6. 35 U.S.C.A. § 271(e)(2)(A) (West 1984 & Supp. 2000).

protecting the rights of companies that invest substantially to develop patented pioneer drugs. Under the FDCA, as amended by the Hatch-Waxman Act, a pharmaceutical manufacturer may submit an ANDA to seek expedited FDA approval of a generic version of a pioneer drug that has been approved by the FDA (a "listed drug"). 21 U.S.C.A. § 355(j) (West 1999). The generic drug manufacturer must show in its ANDA that its drug is "bioequivalent" to the listed drug. 21 U.S.C.A. § 355(j)(2)(A)(iv) (West 1999).[7] The generic manufacturer must make one of four certifications concerning the applicable listed drug. The instant case concerns the fourth certification — that the listed drug's patent "will not be infringed by the

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7. "Bioequivalence" means "the absence of a significant difference in the rate and extent to which the active ingredient . . . becomes available at the site of drug action when administered at the same . . . dose under similar conditions in an appropriately designed study." 21 C.F.R. § 320.1(e) (2000). The ANDA biobatch samples submitted to the FDA with the ANDA are central to the FDA's regulatory approval process. The requisite bioequivalence studies (also filed with the ANDA) are invariably performed on the biobatch. The biobatch must be representative of the product that the ANDA applicant proposes to sell commercially. *See* New Drug and Abbreviated New Drug Applications; Proposed Preapproval Inspection Requirements, 56 Fed. Reg. 3180 (1991) (to be codified at 21 C.F.R. § 314) (describing pre-approval inspection requirements). It must be manufactured using the same equipment and same production methods, and under the same conditions as those the applicant will use to produce the commercial drug product. An application must contain all information concerning the biobatch including specifications relating to stability and particle size if relevant, to ensure that the drug used to perform bioavailability studies is the same as the drug presented in the ANDA. 21 C.F.R. § 314.50(d)(1)(i) (2000); 56 Fed. Reg. 3180 (1991); *see* 21 C.F.R. § 207.3(d)(8) (2000).

manufacture, use or sale of the new drug." 21 U.S.C.A. § 355(j)(2)(A)(vii)(IV) (West 1999) ("Paragraph IV certification").

If an ANDA is certified under Paragraph IV, the applicant must notify the patent's owner of the certification. 21 U.S.C.A. § 355(j)(2)(B) (West 1900). The ANDA will be approved unless the listed drug's patent owner brings suit for infringement under 35 U.S.C. § 271(e)(2)(A) within forty-five days after receiving the required § 355(j)(2)(B) notice. If suit is brought, FDA approval is suspended until the earliest of (1) the expiration of the patent, (2) judicial resolution of the correctness of the ANDA certification[8], or (3) thirty months from the receipt of notice under Paragraph IV, subject to modification by the court. 21 U.S.C.A. § 355(j)(5)(B)(iii)(I)-(III) (West 1999). Other significant rights also are accorded by the act of ANDA submission with the requisite patent certification. For example, the first ANDA applicant is granted a 180-day marketing exclusivity period in relation to other ANDA applicants if its ANDA is approved. 21 U.S.C.A. § 355(j)(5)(B)(iv) (West 1999).

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8. In response to *Torpharm v. Shalala*, 1997 U.S. Dist. LEXIS 21983 (D.D.C. 1997) and *Mylan Pharmaceuticals, Inc. v. Shalala*, No. 99-2995, slip op. (D.D.C. January 4, 2000), the FDA has recently announced a proposed rule under which the applicable court decision terminating the 30 month moratorium on market approval will be a decision of a District Court. 180-Day Generic Drug Exclusivity for Abbreviated New Drug Applications, 64 Fed. Reg. 42873 (1999) (to be codified at 21 C.F.R. § 314); *see* Guidance for Industry on Court Decisions, ANDA Approvals, and 180-Day Exclusivity Under the Hatch-Waxman Amendments to the Federal Food, Drug, and Cosmetic Act; Availability, 65 Fed. Reg.16922 (2000) (notice).

The Hatch-Waxman Act also amended the patent laws to provide that "it shall not be an act of infringement to make, use or sell . . . a patented invention . . . solely for uses reasonably related to the development and submission of information under a Federal law which regulates the manufacture, use or sale of drugs." 35 U.S.C.A. § 271(e)(1) (West 1984 & Supp. 2000). Congress created this exemption to expedite the approval of generic drugs by negating the holding in *Roche Prod., Inc., v. Bolar Pharm Co.*, 733 F.2d 858 (Fed. Cir. 1984) under which such acts were held to be infringements. However, at the same time, to protect the rights of drug patentees, Congress established a new act of patent infringement sufficient to create case or controversy jurisdiction to enable a Court to promptly resolve any dispute concerning infringement not exempt under § 271(e)(1). Congress specifically defined this new act of infringement as the submission of an ANDA to the FDA with a Paragraph IV certification "if the purpose of such a submission is to obtain approval under the [FDCA] to engage in the commercial manufacture, use or sale of a drug . . . claimed in a patent . . . before the expiration of such a patent." 35 U.S.C.A. § 271(e)(2)(A) (West 1984 & Supp. 2000)[9]. Congress intended this section to benefit patentees by providing them with a defined act of infringement, on a specifically defined product made pursuant to a specific set of specifications, sufficient to create case or controversy jurisdiction to enable a court to resolve any dispute

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9. *See Bristol-Myers Squibb Co. v. Royce Laboratories, Inc.*, 69 F.3d 1130, 1136 (Fed. Cir.), *cert. denied*, 516 U.S. 1026 (1995) (submission of certification [under 21 U.S.C. § 355(j)(2)(A)(vii)(IV)] is an act of infringement under 35 U.S.C. § 271(e)(2)). If the paragraph IV certification that is made with the filing of the ANDA is incorrect, the FDA *may not approve the ANDA.* 21 U.S.C.A. § 355(j)(4)(K) (West 1999).

concerning validity or infringement within a 30-month period. If, as the Court of Appeals has held, an ANDA applicant is permitted to make changes in the nature of its product, without a concomitant requirement that it file a new ANDA or new patent certification, the patentee will be required to attack a moving target while this 30-month period is being exhausted.[10]

C. Bayer's '446 Patent

Petitioners Bayer AG and Bayer Corporation (collectively "Bayer") own U.S. Patent No. 5,264,446 ("446 patent"), which was issued in 1993. The '446 patent describes and claims pharmaceutical formulations or compositions containing nifedipine as the active ingredient.[11] The claimed drug products are used to treat hypertension or high blood pressure. Bayer scientists discovered that formulations

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10. Given the test set forth by the Court of Appeals — that the infringement inquiry focus on the product the applicant will "likely market" — the applicant may present an original ANDA application in which the product upon which it is based clearly infringes, change its specification during litigation to obtain summary judgment of non-infringement and thereafter change its specification again to that of an infringing product and obtain approval. Although the patentee still has the opportunity to file a new infringement suit based on the product that the ANDA applicant ultimately *actually* sells, it will have lost the protection of the statutory 30-month period, and the ANDA applicant will still retain its marketing exclusivity rights.

11. Claim 1 of the '446 patent recites a "solid pharmaceutical composition comprising as the active ingredient an effective amount of nifedipine crystals with a specific surface area of 1.0 to 4 m^2/g, in admixture with a solid diluent, to result in a sustained release of nifedipine." Lodging Appendix.

containing relatively small nifedipine crystals, defined by their specific surface area ("SSA"), in combination with other tablet ingredients called solid diluents, can be administered orally to humans and provide a long-lasting, high concentration of nifedipine in the bloodstream.[12]

Bayer's patented sustained release hypertension drugs are particularly useful because hypertension is a medical condition which in large part is asymptomatic. Consequently, patients often fail to comply with prescriptions requiring multiple daily doses. Prior to Bayer's discovery, patients were required to take three or more doses of immediate release nifedipine products. The introduction of sustained release nifedipine products, like Bayer's Adalat CC®, solved this problem by permitting a single daily dose. The invention claimed in the '446 patent has thus provided a beneficial new treatment for hypertension. Combined sales of pharmaceutical compositions under the '446 patent have exceeded $1 billion annually.

D. Elan's Ever-Changing ANDA

In June 1997, Elan submitted an ANDA to the FDA pursuant to the Hatch-Waxman Act seeking approval to market a generic and bioequivalent version of Bayer's patented nifedipine product, Adalat CC®. Elan also submitted a paragraph IV certification stating that its proposed product would not infringe the '446 patent, and served Bayer with a copy of the certification. Bayer filed suit on August 22, 1997 in the U.S. District Court for the District of Georgia challenging Elan's certification of non-infringement.

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12. SSA is the total surface area of all the individual crystals per unit weight, expressed in square meters of surface per gram of crystals or "m^2/g." SSA generally is inversely proportional to particle size — the larger the particles, the smaller the SSA.

In support of its original ANDA, Elan submitted to the FDA — and produced to Bayer in the litigation — samples of its ANDA product, that is, its biobatch. *See* 21 U.S.C.A. § 355(j)(2)(A) (West 1999) (ANDA contents); *see also* 21 C.F.R. § 314.94(a)(10) (2000) (ANDA contents). Elan submitted bioequivalency data to the FDA from clinical tests using this biobatch as an essential part of its original ANDA.

During the litigation, Bayer asserted that the biobatch infringed the '446 patent. Among other things, Bayer presented undisputed evidence that the SSA of nifedipine crystals decreases significantly over time and under various storage conditions, thus calling into question the SSA of the biobatch nifedipine crystals at the time they were used in making Elan's biobatch tablets.

On March 18, 1998, long after it had submitted its ANDA, Elan notified the FDA of an amendment to its original ANDA directed solely to the issues raised by Bayer in the litigation. Elan for the first time set a specification for the SSA of its nifedipine — the SSA "is to be greater than 5 m^2/g", that is, allegedly outside the literal SSA range recited in Bayer's patent. Shortly thereafter, in June, 1998, Elan moved for summary judgment of non-infringement, claiming, *inter alia*, that its newly instituted SSA specification avoided literal infringement because Elan was required to use nifedipine raw material with an SSA outside the literal range claimed in the '446 patent. Thus, after consuming ten months of the thirty months allotted to Bayer to prove that the Elan's ANDA product infringed, Elan changed its product.

Bayer then pointed to serious deficiencies in Elan's new specification, which purportedly controlled the nifedipine SSA that Elan would use in the future. Bayer emphasized that Elan had not made any tablets using its new SSA specification and that it did not even know how it intended to comply with this specification and verify the specified SSA of its nifedipine raw material.

On October 23, 1998, after the close of discovery and the completion of summary judgment briefing in the District Court, Elan *again* amended its ANDA in an attempt to correct the many deficiencies noted by Bayer. Elan this time promised that in the future it would buy equipment to perform its own SSA testing and would perform such tests within 5 days prior to tablet manufacture.

In opposing Elan's motion for summary judgment, Bayer brought to the District Court's attention that no tablets had been made under the new specification, and that Elan had no data and no testing equipment. Elan had made no drug that complied with the SSA specification and testing protocol that it added after the close of discovery. Throughout the litigation, Elan's production and testing procedures were undergoing change. Neither Bayer nor the FDA were provided with any samples that Elan had manufactured according to its new (and purportedly final) product specifications.

E. The District Court Decision

Notwithstanding the absence of any product made in accordance with Elan's new specifications, the District Court, by order dated March 16, 1999, granted Elan's motion for summary judgment. *Bayer AG v. Elan Pharmaceutical Corp.*,

64 F. Supp. 2d 1295,1304 (N.D. Ga. 1999). The District Court held, on the basis of the amended ANDA, that Elan's "proposed product" would not literally infringe the '446 patent because its "likely product" would not contain nifedipine within the literal SSA range of the Bayer patent. *Id.* at 1300. In reaching this conclusion, the District Court relied heavily on Elan's amended product specification requiring use of nifedipine with an SSA of greater than 5 m^2/g. *Id.* The District Court also relied on an SSA specification of no less than 4.7 m^2/g established by Elan's supplier of nifedipine after Elan's ANDA was submitted. *Id.* The District Court did not address Bayer's concerns as to whether Elan could actually manufacture a non-infringing product within these specifications, holding that Bayer had offered no evidence that "the product that Elan would likely sell following FDA approval would likely infringe its patent." *Id.*

F. The Court of Appeals Decision

The Federal Circuit affirmed the District Court's decision granting summary judgment in favor of Elan. *Bayer AG v. Elan Pharmaceutical Corp.*, 212 F.3d 1241, 1248 (Fed. Cir. 2000). The Court acknowledged that its focus on "what the ANDA applicant will likely market if its application is approved, an act that has not yet occurred," was a "hypothetical inquiry." *Id.* The Court noted Bayer's unrebutted contention that Elan "has not produced any samples, or test data from samples, under the requirements set forth in Elan's amended ANDA specification." *Id.* The Court agreed that "there may be factual issues as to whether Elan can comply with its specification." *Id.* at 1250.

However, the Federal Circuit nonetheless held that "the specification in Elan's ANDA mandates a finding of no literal infringement." *Id.* at 1249. The Court relied solely on Elan's specification that the specific surface area "is to be 5 m^2/g or greater" and Elan's statement of intent that it would measure SSA within 5 working days prior to manufacture to ensure that the specification of greater than 5 m^2/g for SSA is met. *Id.*

In reaching this conclusion, the Court held that Bayer's contentions regarding the original biobatch, the only tablets actually produced by Elan, were misplaced. *Id.* According to the Court, the SSA of the biobatch was irrelevant because the focus is on the product that will be sold after the FDA's approval of the ANDA, not on the product which is submitted to obtain FDA approval. *Id.* The Court regarded the filing of an ANDA, and by implication the required provision of a biobatch, as an " 'act' [that] is merely a vehicle 'to create case or controversy jurisdiction to enable a court to promptly resolve' a dispute concerning an infringement that will happen in the future." *Id.* (quoting *Glaxo v. Novopharm, Inc.*, 110 F.3d 1562, 1569 (Fed. Cir. 1997)).

The Court placed great reliance on Elan's then-current ANDA specification. However, it failed to consider either the critical interrelationship between the ANDA specification as filed and the patentee's right to bring an infringement action under 35 U.S.C. § 271(e)(2)(A) or the fact that this specification was constantly changing. The Court noted that "Bayer would be able to sue under 35 U.S.C. § 271(e)(2)(A) if any proposed change puts the drug's SSA into an infringing range." *Id.* at 1250. However, the clear language of this section would preclude such an action, since it is only the

submission of the ANDA itself, not changes to the ANDA (or ANDA product) during its pendency, which create an act of infringement.[13]

REASONS FOR GRANTING THE WRIT

A. There Is No Case Or Controversy As To Any Product Other Than That Defined In The ANDA As Submitted

In the Hatch-Waxman Act, Congress created a statutory right-of-action — in effect, an artificial "case or controversy" — as part of a legislative framework that carefully balances and protects the rights of research-based drug developers with the need to facilitate the development of generic drugs. Among the stated purposes of this legislation are "to make available more low cost generic drugs" and "to create a new incentive for increased expenditures for research and development of certain products which are subject to premarket approval." *See* H.R.Rep. No. 98-857(I), at 14-15 (1984), reprinted in 1984 U.S.C.C.A.N. 2647, 2647-48.

The Hatch-Waxman Act also substantially modified the Patent Statutes to implement this framework. All research and development work conducted to prepare and file an ANDA became exempt from patent infringement charges. However, to counterbalance this exemption from infringement, the submission of the ANDA itself became an act of infringement. Based on this specific limited

13. Of course, since final product approval had not yet been obtained at the time the District Court granted summary judgment, Elan had the ability to modify its ANDA yet again. Thus, even at this time, the determination of the "likely product" was still a purely hypothetical, and thus impermissible, exercise by the Court.

infringement, the patentee can bring suit to enforce its patent. Absent the statute, in the face of § 271(e)(1), there simply would be no question that under the facts of the present action, "case or controversy" would have been lacking and the courts would have had no jurisdiction over this matter. Since the statute creates an unusual exception to the limitations of Article III, this Court should interpret and apply it narrowly, in conformance with the explicit language of the Hatch-Waxman Act and the Patent Statutes.

The ruling by the Federal Circuit in this case goes well beyond the statutory basis for the action brought by Bayer to enforce its patent under 35 U.S.C. § 271(e)(2)(A). The hypothetical product upon which the Federal Circuit based its holding was not the product Elan described in its original ANDA submission. It was not the product that created Bayer's right to sue. Thus, the decisions of the lower courts were necessarily outside the scope of authority granted by the statute and were directed to a matter as to which there simply was no "case or controversy." In short, there was no case or controversy as to the product defined by the then-current modified specification because it was not the product that gave rise to Bayer's right to enforce its patent. There was no case or controversy as to the product defined by the then-current modified specification because it might or might not ever be approved and sold so as to constitute a "real" infringement. 35 U.S.C.A. § 271(a) (West 1984 & Supp. 2000).

Under Article III, federal courts may adjudicate only actual, ongoing controversies. *Honig v. Doe*, 484 U.S. 305, 317, 108 S. Ct. 592, 601 (1988); *Whitmore v. Arkansas*, 495 U.S. 149, 155, 110 S. Ct. 1717, 1723 (1990). Article III requires that a dispute be justiciable when an action is filed and throughout the litigation. *Arizonans for Official English v. Arizona*, 520 U.S. 43, 67, 117 S. Ct. 1055, 1069 (1997).

The ripeness requirement "is designed to prevent the courts, through avoidance of premature adjudication, from entangling themselves in abstract disagreements." *Ohio Forestry Ass'n v. Sierra Club*, 523 U.S. 726,732-33, 118 S. Ct. 1665, 1670-71 (1998). In deciding whether a case is not ripe for review, a court must consider, *inter alia*, "whether courts would benefit from further factual development of the issues presented." *Id.*; *see also Navegar, Inc. v. U.S.*, 103 F.3d 994, 997-98 (D.C. Cir. 1997) (principle of justiciability derived from Article III serves several important functions, including ensuring that federal courts act only when disputes before them involve "sharply-defined issues"); *Texas v. U.S.*, 523 U.S. 296, 300 (1998) (claim is not ripe for adjudication if it rests upon contingent future events that may not occur as anticipated, or may not occur at all"). A matter becomes moot if events have so transpired that a decision on the issue presented will neither presently affect the parties' rights nor have a more-than-speculative chance of affecting them in the future. *Transwestern Pipeline Co. v. F.E.R.C.*, 897 F.2d 570, 575 (D.C. Cir. 1990).

By changing its ANDA specification, Elan effectively rendered the infringement action moot. The act which created the infringement, the submission of the original ANDA, was superseded by Elan's later revisions. The nature of Elan's commercial product remained speculative until final approval and actual sale. There could be no further act of infringement by Elan unless it refiled its ANDA or recertified under Paragraph IV, or it obtained approval and actually sold a product. However, Elan did not refile or recertify, presumably because either of these actions would have restarted the 30-month clock and deprived it of valuable marketing exclusivity rights as the first ANDA applicant. Since Elan had not obtained FDA approval, it could not actually sell a

product. Simply stated, due to Elan's actions subsequent to filing its ANDA there was no longer any "case or controversy".

Instead of holding that the amendments to the ANDA mooted the "case or controversy" created by the submission of the original ANDA application, the Federal Circuit compounded the problem of justiciability by proceeding to grant summary judgment on an amorphous, abstract, and hypothetical dispute — whether, if Elan could produce a product pursuant to the amended specifications, and thereby overcome the problems caused by the degradation of the SSA of nifedipine over time, such a prospective product would be non-infringing. In reaching this issue, and resolving it in the absence of any final testing methods or even a sample produced pursuant to the amended specifications, the Federal Circuit applied 35 U.S.C. § 271(e)(2)(A) so as to permit federal courts to render purely advisory opinions on hypothetical disputes.[14]

At the time judgment was entered in this case, there was no assurance that Elan could make a product either within its new specification or outside the claims of the '446 patent, there was no evidence that it had attempted to do so and there was no evidence that it had the necessary equipment either to do so or to determine whether it had succeeded. The District Court entered an advisory opinion, affirmed by the Federal Circuit, that *if* Elan made a product having an SSA meeting the amended ANDA specification, it would

14. This purely hypothetical controversy arose in the absence of a legally cognizable making, using, offering to sell or sale of a patented invention. *Compare* 35 U.S.C.A. § 271(a) (West 1984 & Supp. 2000) *with* 35 U.S.C. § 271(e)(1) (West 1984 & Supp. 2000).

not literally infringe. The record was far short of that required to establish a substantial controversy of sufficient immediacy and reality to warrant entry of judgment.

Congress enacted the Hatch-Waxman Act for specific, well-defined reasons. *See Bristol-Myers Squibb Company v. Royce Laboratories, Inc.*, 69 F.3d 1130, 1131-32 (Fed. Cir. 1995) (explaining statute). To that end, Congress established a limited exemption for drug research and development. *Id.* At the same time, it granted to patentees the special protection of a statutory right-of-action. To trigger those rights, Congress established a bright-line standard — "it shall be an act of infringement" for an ANDA applicant to "submit" an ANDA to the FDA "for a drug claimed in a patent or the use of which is claimed in a patent" if the purpose of "such submission" is to obtain FDA approval. *Id*; 35 U.S.C.A. § 271(e)(2)(A)(West 1984 & Supp. 2000). Congress inextricably tied the original ANDA filing to the claims in the applicant's Paragraph IV certification and set aside a maximum of 30 months for the patentee to challenge this product.

In this case, the Court of Appeals misconstrued and misapplied the unambiguous language creating those rights. By so doing, it has taken away the very protections that Congress carefully established on behalf of patentees and substantially altered the statutory balance created by Congress with the Hatch-Waxman Act.

It is fundamental that words in a statute must be read in context and in view of their "place in the overall statutory scheme." *Food and Drug Admin. v. Brown & Williamson Tobacco Corp.*, 120 S. Ct. 1291, 1301 (2000). They must fit into "a harmonious whole." *Id.* A construction that avoids

constitutional infirmity is preferred. *Feltner v. Columbia Pictures Television, Inc.*, 523 U.S. 340, 345, 8 S. Ct. 1279, 1283 (1998). Where Congress has provided for an express remedy, the court must "be especially reluctant" to create additional remedies. *See Chair King, Inc. v. Houston Cellular Corp.*, 131 F.3d 507, 511-12 (5th Cir. 1997). The Court of Appeals disregarded the submission of the ANDA. By focusing on the "likely product", including all amendments to and supplementation of the ANDA made subsequent to the original submission at any time during the 30-month stay, the Federal Circuit has allowed generic manufacturers to obtain a broader exemption from infringement that substantially deviates from and undermines the balance intended by Congress.

As this Court described the ANDA process in *Eli Lilly and Co. v. Medtronic, Inc.*, 496 U.S. 661, 678, 110 S. Ct. 2683, 2692 (1990), "[t]his scheme will not work, of course, if the holder of the patent pertaining to the pioneer drug is disabled from establishing in court that there has been an act of infringement." By permitting an ANDA applicant to defeat a claim of infringement by amending its original specification and proposing incomplete plans for how this specification will be met without ever producing a product under its final specification, while the clock is ticking on the patentee's thirty-month period for proving infringement, the Federal Circuit has in effect disabled petitioners, as well as other patentees, from establishing an act of infringement during the ANDA process. By focusing on the product the applicant "will likely market if its application is approved", the Federal Circuit has further disabled petitioners, and other patentees, by condoning a scheme under which the act of infringement can be constantly changing — even as the patentee is attempting to establish it — up to the very point of summary judgment.

In *Eli Lilly*, this Court recognized that § 271(e)(2) already has created a "highly artificial act of infringement that consists of submitting an ANDA . . . containing the fourth type of certification that is in error to whether commercial manufacture, use, or sale of the new drug (none of which, of course, has actually occurred) violates the relevant patent." *Id.* In disregarding the clear language of the Hatch-Waxman Act and the Patent Statutes, the Federal Circuit has now strayed from this Court's pronouncement in *Eli Lilly*. The Hatch-Waxman Act, together with the changes to 35 U.S.C. § 271 which it engendered, created a narrow, explicitly defined and limited basis upon which the federal courts may adjudicate the respective rights of drug patentees and generic manufacturers. It did not empower the federal courts to enter advisory opinions on hypothetical questions.

The future well-being of the United States depends not only on securing adequate and rapid access by the public to generic drug products but also on assuring that research-based companies continue to develop new and better drugs. In meeting this need, Congress, through the Hatch-Waxman Act, created an explicit framework for balancing and protecting both interests. In this case, by substituting its own standards for those established by Congress, the Federal Circuit has significantly modified that balance. Since Congress has spoken, it is only Congress, and not the Federal Circuit, which is entitled to alter this balance.

CONCLUSION

This Court should grant certiorari to establish the proper standards for infringement actions grounded on ANDA applications and to address whether the Federal Circuit has impermissibly applied 35 U.S.C. § 271(e)(2) so as to authorize federal courts to render advisory opinions on modified ANDA applications in violation of the case or controversy requirement of Article III of the Constitution.

Respectfully submitted,

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APPENDIX

APPENDIX A — OPINION OF THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT DATED AND DECIDED MAY 12, 2000

BAYER AG and BAYER CORPORATION,

Plaintiffs-Appellants,

v.

ELAN PHARMACEUTICAL RESEARCH CORPORATION and ELAN CORPORATION, PLC,

Defendants-Appellees.

99-1365

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

* * *

May 12, 2000, Decided

* * *

PRIOR HISTORY:
Appealed from: United States District Court for the Northern District of Georgia. Senior Judge William C. O'Kelly.

* * *

Appendix A

JUDGES:
Before CLEVENGER, SCHALL, and BRYSON Circuit Judges.

OPINION BY:
SCHALL

OPINION:

SCHALL, Circuit Judge.

Bayer AG and Bayer Corporation (collectively, "Bayer") own United States Patent No. *5,264,446* (the " *'446* patent"). The *'446* patent claims a pharmaceutical composition that contains nifedipine crystals of a defined specific surface area ("SSA"). The patent also claims the composition's method of preparation and a method of treatment using the composition. Bayer sued Elan Pharmaceutical Research Corporation and Elan Corporation, PLC (collectively, "Elan") in the United States District Court for the Northern District of Georgia alleging infringement by Elan of the *'446* patent. Bayer alleged infringement under *35 U.S.C. § 271*(e)(2)(A)[1] based on Elan's filing of an abbreviated new drug application ("ANDA") seeking approval by the Food and Drug Administration ("FDA") of a generic version of Bayer's ADALAT CC, Bayer's commercial embodiment of the pharmaceutical composition claimed in the *'446* patent. The district court granted Elan's motion for summary

1. All statutory references are to the 1994 version of the United States Code as modified by Supplement III of 1997. All regulatory references are to the 1999 version of the Code of Federal Regulations.

judgment on both literal infringement and infringement under the doctrine of equivalents and entered judgment for Elan. See *Bayer AG v. Elan Pharm. Research Corp., 64 F. Supp. 2d 1295, 1304 (N.D. Ga. 1999)*. We affirm.

BACKGROUND

A. The ANDA Process

As this court has described before, the Hatch-Waxman Act (the "Act") amended the Federal Food, Drug, and Cosmetic Act, Pub. L. No. 52-675, 52 Stat. 1040 (1938) (codified as amended at *21 U.S.C. §§ 301* et. seq. (1994)) (the "FDCA"), as well as the patent laws. See *Bristol-Myers Squibb Co. v. Royce Lab., Inc., 69 F.3d 1130, 1131-32, 36 U.S.P.Q.2D (BNA) 1641, 1642-43 (Fed. Cir. 1995); DuPont Merck Pharm. Co. v. Bristol-Myers Squibb Co., 62 F.3d 1397, 1399-1401, 35 U.S.P.Q.2D (BNA) 1718, 1720-21 (Fed. Cir. 1995)*. Under the FDCA, as amended by the Act, a pharmaceutical manufacturer submits an ANDA when seeking expedited FDA approval of a generic version of a drug previously approved by the FDA (a "listed drug"). See *21 U.S.C. § 355*(j). An ANDA can be filed if the generic drug manufacturer's active ingredient is the "bioequivalent"[2]

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2. A drug is bioequivalent to a listed drug if the extent and rate of absorption of the drug are not significantly different from that of the listed drug. See *21 U.S.C. § 355*(j)(8)(B)(i). Alternatively, a drug is bioequivalent to a listed drug if the extent of absorption is not significantly different from that of the listed drug and the drug's rate of absorption differs from that of the listed drug and the difference in the rate of absorption is intentional, is reflected in the labeling of the product, and is medically insignificant for the drug. See *21 U.S.C. § 355*(j)(8)(B)(ii); see also *21 C.F.R. § 320.1(e)*.

of the listed drug. See *21 U.S.C. § 355*(j)(2)(A)(iv). When submitting an ANDA, a manufacturer must certify one of four statements concerning the applicable listed drug: (i) the listed drug is not patented (a "Paragraph I certification"); (ii) the listed drug's patent has expired (a "Paragraph II certification"); (iii) the expiration date of the listed drug's patent (a "Paragraph III certification"); or (iv) the listed drug's patent "is invalid or . . . it will not be infringed by the manufacture, use, or sale of the new drug" covered by the ANDA (a "Paragraph IV certification"). *21 U.S.C. § 355*(j)(2)(A)(vii)(I)-(IV). If an ANDA is certified under Paragraph IV, the applicant must notify the patent's owner of the certification. See *21 U.S.C. § 355*(j)(2)(B).

An ANDA certified under Paragraphs I or II is approved immediately after meeting all applicable scientific and regulatory requirements. See *21 U.S.C. § § 355*(j)(5)(A), (B)(i). An ANDA certified under Paragraph III must, even after meeting all applicable scientific and regulatory requirements, wait for approval until the listed drug's patent expires. See *21 U.S.C. § § 355*(j)(5)(A), (B)(ii). An ANDA certified under Paragraph IV is approved immediately after meeting all applicable scientific and regulatory requirements unless the listed drug's patent owner brings suit for infringement under *35 U.S.C. § 271*(e)(2)(A) within forty-five days of receiving the notice required under *21 U.S.C. § 355*(j)(2)(B). See *21 U.S.C. § 355*(j)(5)(B)(iii). If suit is brought, the FDA is required to suspend approval of the ANDA, and the FDA cannot approve the ANDA until the earliest of three dates: (i) the date of the court's decision that the listed drug's patent is either invalid or not infringed; (ii) the date the listed drug's patent expires, see *35 U.S.C.*

§ 271(e)(4)(A), if the court finds the listed drug's patent infringed; or (iii) subject to modification by the court, the date that is thirty months from the date the owner of the listed drug's patent received notice of the filing of a Paragraph IV certification. See *21 U.S.C. § 355*(j)(5)(B)(iii)(I)-(III).

The Act modified the patent laws to provide that "it shall not be an act of infringement to make, use, or sell . . . a patented invention . . . solely for uses reasonably related to the development and submission of information under a Federal law which regulates the manufacture, use, or sale of drugs." *35 U.S.C. § 271*(e)(1). A Paragraph IV certification, however, is deemed to be an act of infringement "if the purpose of such a submission is to obtain approval under the [FDCA] to engage in the commercial manufacture, use, or sale of a drug . . . claimed in a patent or the use of which is claimed in a patent before the expiration of such a patent." *35 U.S.C. § 271*(e)(2)(A); see also *Glaxo, Inc. v. Novopharm, Ltd., 110 F.3d 1562, 1567, 42 U.S.P.Q.2D (BNA) 1257, 1261-62 (Fed. Cir. 1997).* "If the court determines that the patent is not invalid and that infringement would occur, and that therefore the ANDA applicant's Paragraph IV certification is incorrect, the patent owner is entitled to an order that FDA approval of the ANDA containing the Paragraph IV certification not be effective until the patent expires." *Royce Lab., 69 F.3d at 1135, 36 U.S.P.Q.2D (BNA) at 1646* (emphasis omitted).

Appendix A

B. The *'446* patent

The application that matured into the *'446* patent was filed on August 20, 1981; the *'446* patent issued on November 23, 1993. The *'446* patent relates to solid pharmaceutical compositions, such as tablets, that contain nifedipine crystals of a given SSA,[3] combined with a solid diluent that is adapted for formation into tablets. Nifedipine is a compound that acts on the body's circulation — a coronary vasodilator — and is used to control such medical conditions as high blood pressure. The *'446* patent attempts, through its claimed SSA for nifedipine crystals, to address the problem of poor solubility — absorption of nifedipine into the blood — while still maintaining a sustained presence of nifedipine in the blood, i.e., high bioavailability. The patent seeks to achieve its objective without using such disadvantageous means as large-sized tablets, which are hard to swallow, or liquid formulations, which are very expensive and require protection from light.

The *'446* patent contains twelve independent claims; the claims cover actual compositions of the nifedipine drug, methods of making the drug, and methods of treatment using the drug. Each claim specifies a SSA range for the nifedipine crystal used. Claim 1, which Bayer asserts against Elan, is representative of the composition claims and recites the broadest SSA range:

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3. The SSA of a nifedipine crystal, and any other solid particle, is defined as the total surface area of the particle divided by the particle's weight. SSA, in the *'446* patent, is measured in square meters per gram — m2/g.

Appendix A

> 1. A solid pharmaceutical composition comprising as the active ingredient an effective amount of nifedipine crystals with a specific surface area of 1.0 to 4 m2/g, in admixture with a solid diluent, to result in a sustained release of nifedipine.

'446 patent, col. 5, II. 30-34.

C. Elan's ANDA

Elan submitted an ANDA to the FDA on April 30, 1997, seeking approval for a product that is bioequivalent to Bayer's ADALAT CC product. Elan's ANDA covers a once-daily formulation of nifedipine — an extended release tablet dosage form containing 30 mg of nifedipine. With its ANDA, Elan filed a Certificate of Quality and Analysis ("COA"). The COA related to an analysis performed by Freiberger NE-Metall GmbH ("FNM"), an independent laboratory, on April 17, 1996 with respect to the micronized — finely ground — nifedipine provided to Elan by its nifedipine supplier, Arzneimittelwerk Dresden GmbH ("AWD"). According to the COA, the measured SSA of the micronized AWD nifedipine crystals was 6.15 m2/g. The tablets made from these micronized nifedipine crystals and tested for the ANDA process are referred to by the parties as the "biobatch." Elan also filed with its ANDA a Paragraph IV certification, in which it stated that its nifedipine composition did not infringe the *'446* patent or Bayer's United States Patent No. *4,892,741* (the " *'741* patent"). On July 8, 1997, Elan sent Bayer, as required by *21 U.S.C. § 505*(j)(2)(B)(ii), notice of its ANDA and its Paragraph IV certification, noting that the SSA of its nifedipine was outside any of the *'446* patent's claimed SSA ranges.

On March 18, 1998, Elan amended its ANDA by stating that it had revised the specification for its composition so that the composition only covered nifedipine crystals of a SSA of 5 m2/g or greater. On October 23, 1998, in response to the FDA's request for Elan to define its method of testing and its testing commitment to ensure the nifedipine's SSA, Elan stated that it intended to measure the SSA of its nifedipine no more than five business days before tablet manufacture and that it would discard any nifedipine having a SSA of less than 5 m2/g.

D. District Court Proceedings

After receiving Elan's Paragraph IV certification notice, Bayer filed suit against Elan in federal court in the Northern District of Georgia. Bayer alleged infringement, under *35 U.S.C. § 271*(e)(2), of the *'446* and *'741* patents based on Elan's April 30, 1997 ANDA. Eventually, Bayer decided not to pursue its claim of infringement of the *'741* patent. In due course, Elan moved for summary judgment of noninfringement of the *'446* patent.

In ruling on Elan's motion, the district court decided that there were no genuine issues of material fact and that Elan did not infringe, either literally or under the doctrine of equivalents. See *Bayer, 64 F. Supp. 2d at 1301, 1304.* Regarding literal infringement, the court focused on the question of whether Elan's drug, when placed on the market, would infringe the *'446* patent. See *id. at 1300* (citing *Glaxo, 110 F.3d at 1567-68, 42 U.S.P.Q.2D (BNA) at 1263).* The court concluded that Bayer, who bore the burden of proving infringement, had offered no evidence that Elan's drug would

literally infringe the *'446* patent. See *Bayer, 64 F. Supp. 2d at 1300.* The court noted that Elan's ANDA specifies that the proposed product will have a SSA greater than 5 m2/g and that AWD, Elan's nifedipine supplier, does not sell nifedipine crystals with a SSA under 4.7 m2/g for use in the United States. See id.

Turning to infringement under the doctrine of equivalents, the court concluded that, during prosecution, Bayer[4] had surrendered claim coverage to nifedipine crystals beyond the range of 1.0 to 4 m2/g SSA. See *id. at 1304.* In reaching this conclusion, the court examined the entire prosecution history, from August of 1981 to November of 1993, and focused on (i) Bayer's amendment changing claims 1, 2, and 3 from a SSA range of 1.0 to 6 m2/g to 1.0 to 4 m2/g and (ii) Bayer's general arguments for patentability. See *id. at 1302-03.* The court concluded that Bayer's amendment to a SSA range of 1.0 to 4 m2/g was an attempt to overcome a *35 U.S.C. § 103* obviousness rejection and that Bayer had made statements that constituted a "clear and unmistakable surrender" of subject matter outside of the claimed range of 1.0 to 4 m2/g. *Id. at 1304.*

Based upon its conclusions, the district court granted Elan's motion for summary judgment, finding Elan's Paragraph IV certification to be correct. The court therefore entered judgment in favor of Elan and dismissed Bayer's

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4. The named inventors on the *'446* patent are Ahmed Hegasy and Klaus-Dieter Ramsch. Bayer AG is listed as the assignee of the patent. We refer to Bayer as the party prosecuting the application that matured into the *'446* patent.

complaint. Bayer now appeals.[5] We have jurisdiction pursuant to *28 U.S.C. § 1295*(a)(1).

DISCUSSION

I.

Summary judgment "shall be rendered forthwith if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(c); see *Vivid Techs., Inc. v. American Science & Eng'g, Inc., 200 F.3d 795, 806-07, 53 U.S.P.Q.2D (BNA) 1289, 1297 (Fed. Cir. 1999).* We review a grant of summary judgment without deference. See *Conroy v. Reebok, Int'l, Ltd., 14 F.3d 1570, 1575, 29 U.S.P.Q.2D (BNA) 1373, 1377 (Fed. Cir. 1994).* In addition, we must, as the district court was required to do, draw all reasonable factual inferences in favor of the nonmovant. See *Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 255, 91 L. Ed. 2d 202, 106 S. Ct. 2505 (1986); Semiconductor Energy Lab. Co. v. Samsung Elecs. Co., 204 F.3d 1368, 1378, 54 U.S.P.Q.2D (BNA) 1001, 1008 (Fed. Cir. 2000).*

Determination of a claim of infringement involves a two step inquiry. First, the claims are construed, a question of

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5. The thirty-month delay on FDA approval mandated by *21 U.S.C. § 355*(j)(5)(B)(iii) has expired. At oral argument, Bayer and Elan agreed that Elan is now free to market its product. Elan has chosen to delay doing so, however, until this lawsuit is resolved.

law in which the scope of the asserted claims is defined. See *Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1454-56, 46 U.S.P.Q.2D (BNA) 1169, 1172-74 (Fed. Cir. 1998)* (en banc). Second, the claims, as construed, are compared to the accused device. See id. This is a question of fact. See *Insituform Techs., Inc. v. Cat Contracting, Inc., 161 F.3d 688, 692, 48 U.S.P.Q.2D (BNA) 1610, 1614 (Fed. Cir. 1996)* (citing *SRI Int'l v. Matsushita Elec. Corp. of Am., 775 F.2d 1107, 1125, 227 U.S.P.Q. (BNA) 577, 589 (Fed. Cir. 1985)* (en banc)). To prevail, the plaintiff must establish by a preponderance of the evidence that the accused device infringes one or more claims of the patent either literally or under the doctrine of equivalents. See id.

II.

A. Literal Infringement

1. Literal infringement requires the patentee to prove that the accused device contains each limitation of the asserted claim(s). See *Mas-Hamilton Group v. LaGard, Inc., 156 F.3d 1206, 1211, 48 U.S.P.Q.2D (BNA) 1010, 1014-15 (Fed. Cir. 1998)*. If any claim limitation is absent from the accused device, there is no literal infringement as a matter of law. See id. The district court, in deciding the issue of literal infringement, first looked to Elan's ANDA, noting that it "sets a specification for its proposed product of a specific surface area greater than 5 m2/g." *Bayer, 64 F. Supp. 2d at 1300.* The district court also observed that AWD, Elan's nifedipine supplier, cannot sell nifedipine with a SSA under 4.7 m2/g to anyone who will use or sell a product containing AWD's nifedipine in the United States. See id. In addition,

the court stated that results in the COA indicated that Elan's biobatch tablets had a SSA of 6.15 m2/g. See id. Faced with this evidence, the court found that Bayer had offered only "unsubstantiated assertions" that there was uncertainty as to whether Elan and AWD would meet Elan's ANDA specification. Thus, Bayer had failed to meet its burden of defeating summary judgment by showing a genuine issue of material fact with respect to the issue of literal infringement of the *'446* patent. Id. The district court concluded by noting that Bayer could sue Elan for infringement if Elan begins manufacturing for commercial sale a product with a SSA within 1.0 to 4 m2/g, as claimed by the *'446* patent. See *id. at 1301.*

2. Bayer's first argument on appeal is that a genuine issue of material fact exists as to whether Elan's biobatch infringes the *'446* patent. Bayer contends that an infringing biobatch is material evidence of infringement under *35 U.S.C. § 271*(e)(2). In that regard, Bayer asserts that there is no evidence as to the SSA of Elan's micronized nifedipine crystals just before the crystals were mixed to make biobatch tablets, and it points to certain evidence that nifedipine crystals grow over time before being mixed into tablets, thereby causing the SSA of the crystals to decrease. Bayer also argues that there are genuine issues of material fact as to whether Elan will be able to comply with its SSA specification and thus produce a noninfringing product. Bayer asserts that Elan has not specified a validated test protocol or test equipment to measure the SSA of its nifedipine. It also asserts that Elan has not produced any samples, or test data from samples, under the requirements set forth in Elan's amended ANDA specification.

Elan responds by stating that the ANDA specification, which controls what products Elan can distribute, requires that the SSA of its nifedipine crystals be at least 5 m2/g within five days prior to the manufacturing of tablets. Elan states that the specification is binding on it, and that it could not, under its ANDA, lawfully produce a drug that does not meet the ANDA specification. Elan also states that the focus of the infringement inquiry under § 271(e)(2)(A) is not on the biobatch, but the product that will be marketed based on the ANDA specification filed with the FDA. In any event, Elan argues, there is no genuine issue of material fact as to whether its biobatch's SSA was above 4 m2/g at the time of manufacturing. According to Elan, the COA indicates that the SSA of the biobatch was 6.15 m2/g, and none of the evidence as to the rate of SSA decline presented by Bayer is a proper surrogate for the biobatch upon which Elan based its ANDA.

3. We see no error in the district court's grant of summary judgment of no literal infringement in favor of Elan. Thirty-five U.S.C. § 271(e)(2)(A) provides that it shall be an act of infringement to submit an ANDA "if the purpose of such a submission is to obtain approval . . . to engage in the commercial manufacture, use, or sale of a drug . . . claimed in a patent or the use of which is claimed in a patent before the expiration of such patent." The focus, under § 271(e)(2)(A), is on "what the ANDA applicant will likely market if its application is approved, an act that has not yet occurred." *Glaxo, 110 F.3d at 1569, 42 U.S.P.Q.2D (BNA) at 1263.* "This hypothetical inquiry is properly grounded in the ANDA application and the extensive materials typically submitted in its support." Id. Therefore, it is proper for the

court to consider the ANDA itself, materials submitted by the ANDA applicant in support of the ANDA, and any other relevant evidence submitted by the applicant or patent holder. See *id. at 1570, 42 U.S.P.Q.2D (BNA) at 1263.* However, if the ANDA "is to sell [a] well-defined compound," then the "ultimate question of infringement is usually straightforward." *Id. at 1569, 42 U.S.P.Q.2D (BNA) at 1263.*

We believe that the specification in Elan's ANDA mandates a finding of no literal infringement. Elan's specification indicates that "the specific surface area of the micronized nifedipine is to be 5 m2/g or greater," and that this SSA "will be reflected in certification of analysis provided by Elan's supplier (AWD)." Elan further defines its specification by noting that it is "Elan's intention to measure specific surface area on the micronized Nifedipine material prior to use (within 5 working days prior to blend manufacture) to ensure that the >/= 5 m2/g specification for specific surface area is met. Material not meeting this specification will not be used for manufacture." Thus, according to Elan's ANDA specification, nifedipine used in its drug cannot have a SSA of less than 5 m2/g within five working days prior to manufacturing. Significantly, Bayer does not allege that within five working days, the nifedipine's SSA will decrease from 5 m2/g to a literally infringing size of 4 m2/g or less.[6] Therefore, under the ANDA specification, Elan cannot literally infringe the *'446* patent.

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6. Evidence produced by Bayer before the district court showed, at best, a decline in SSA from 5.09 m2/g to 4.91 m2/g over a six day period.

Bayer's focus on the biobatch, whose test data was submitted with Elan's ANDA, is misplaced for two reasons. First, the Act specifically provides an ANDA applicant immunity from allegations of infringement for acts that are necessary in preparing an ANDA. See *35 U.S.C. § 271*(e)(1); *Glaxo, 110 F.3d at 1568, 42 U.S.P.Q.2D (BNA) at 1262; Royce Lab., 69 F.3d at 1131, 36 U.S.P.Q.2D (BNA) at 1643.* The production of a biobatch, and the submission of a COA regarding this biobatch, are required in the ANDA application process. See *21 U.S.C. § 355*(j)(2)(A); *21 C.F.R. § 314.94(a)(7).* Thus, even if the biobatch falls within the scope of the claims, the Act specifically indicates that such actions by Elan cannot constitute infringement. In addition, the focus of the infringement inquiry under *35 U.S.C. § 271*(e)(2)(A) is on the product that will be sold after the FDA's approval of the ANDA, see *Glaxo, 110 F.3d at 1569, 42 U.S.P.Q.2D (BNA) at 1263,* not on the biobatch that is produced to facilitate FDA approval. The filing of an ANDA is considered an act of infringement under § 271(e)(2)(A), but this "act" is merely a vehicle "to create case or controversy jurisdiction to enable a court to promptly resolve" a dispute concerning an infringement that will happen in the future. *Glaxo, 110 F.3d at 1569, 42 U.S.P.Q.2D (BNA) at 1263.*

Second, the specification in Elan's ANDA defines its product in a way that directly addresses the question of infringement — the SSA of the nifedipine crystals. Elan is bound by this specification. The dispute between the parties concerns the SSA of the nifedipine that Elan will use in its drug. Elan stated to the FDA that the SSA of its nifedipine composition will not be less than 5 m2/g, clarifying in an

amendment that the SSA will be 5 m2/g or more five working days before manufacturing. Elan is required, under *21 C.F.R. § 314.94(a)(9)*, to comply with *21 C.F.R. § 314.50(d)(1)(i)* and state the ANDA drug's specification, including its particle size and the process controls used in manufacturing to assure the specification is met. Elan, in its initial ANDA and answers to FDA questions, provided this information and sought approval under *21 U.S.C. § 355*(j) based on its specification.

If any of the statements in Elan's specification are false, Elan is subject to civil penalties, see *21 U.S.C. § 335b*(a)(1), and the withdrawal of the approval of its drug, see *21 U.S.C. § 335c*(a)(1). Additionally, if Elan introduces a drug into interstate commerce without complying with the approval requirements of *21 U.S.C. § 355*, it is subject to various additional penalties, see *21 U.S.C. § 331*(d), including an injunction, see *21 U.S.C. § 332*(a), criminal sanctions, see *21 U.S.C. § 333*(a), seizure of the unapproved drug, see *21 U.S.C. § 334*(a)(1), and debarment of its corporation and individual officials from submitting or assisting in the submission of an ANDA in the future, see *21 U.S.C. § 335a*. Elan also would be subject to criminal prosecution for making false statements to the FDA under *18 U.S.C. § 1001*, conspiring to defraud the United States under *18 U.S.C. § 371*, and obstructing proceedings before a federal agency under *18 U.S.C. § 1501*. See, e.g., *United States v. Chatterji, 46 F.3d 1336, 1338 (4th Cir. 1995)*. If Elan changes its ANDA, it must file the changes with the FDA, see *21 C.F.R. § § 314.97*, 314.70(a), and if the changes are to the drug's specification, Elan must obtain approval for the changes before they can be made, see *21 C.F.R. §§ 314.97*,

314.70(b)(1). In short, the only drug Elan can produce upon approval of the ANDA at issue is a drug that does not literally infringe the *'446* patent.

Bayer is correct that in Glaxo, we approved of the district court looking to a biobatch for help in deciding the issue of infringement under *35 U.S.C. § 271*(e)(2)(A). See *Glaxo, 110 F.3d at 1569-70, 42 U.S.P.Q.2D (BNA) at 1262-64.* However, the biobatch in Glaxo was properly considered because the ANDA specification in that case did not define the compound in a manner that directly addressed the issue of infringement. See id. The compound in Glaxo existed in multiple crystalline forms and mixtures, possibly containing either Form 1 or Form 2 ranitidine hydrochloride ("RHCI"), and the asserted patent covered mixtures that contained Form 2 RHCI. See *id. at 1565-66, 42 U.S.P.Q.2D (BNA) at 1260-61.* Thus, the ANDA at issue, which permitted the marketed product to have a Form 1 RHCI purity as low as 90%, see *id. at 1564, 42 U.S.P.Q.2D (BNA) at 1260,* did not address the question of infringement — whether a drug produced under the ANDA would contain Form 2 RHCI. Here, however, the ANDA directly addresses the question of infringement; it recites that the SSA of Elan's drug will be 5 m2/g or above. Thus, we have before us an ANDA specification that, in the words of Glaxo, describes a "well-defined compound," and thus "the ultimate question of infringement is . . . straightforward." *Id. at 1569, 42 U.S.P.Q.2D (BNA) at 1263.* Elan's biobatch does not control the issue of infringement.

Elan's ANDA specification requires Elan to produce a product that includes nifedipine with a SSA of 5 m2/g or

above five working days prior to manufacture. Although there may be factual issues as to whether Elan can comply with its specification, they are not material factual issues because *21 U.S.C. § 331*(d) prohibits Elan from selling any product that does not meet its ANDA's requirements. Thus, focusing on what the ANDA applicant will likely market under its application, Elan, under its current ANDA specification, will either market a drug with a SSA of 5 m2/g or greater five days prior to manufacture, or Elan will not, legally, market any drug under its ANDA. Finally, as discussed above, if Elan attempts to change its ANDA specification, it must pursue approval of the change(s). Thus, Bayer would be able to sue under *35 U.S.C. § 271*(e)(2)(A) if any proposed change puts the drug's SSA into an infringing range, 4 m2/g or below.

B. Infringement Under the Doctrine of Equivalents

1. If an asserted claim does not literally read on an accused product, infringement may still occur under the doctrine of equivalents if there is not a substantial difference between the limitations of the claim and the accused product. See *Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17, 29, 39-41, 41 U.S.P.Q.2D (BNA) 1865, 1869, 1875-76, 137 L. Ed. 2d 146, 117 S. Ct. 1040 (1997).* Infringement under the doctrine of equivalents is a question of fact. See *Insituform Techs., 161 F.3d at 692, 48 U.S.P.Q.2D (BNA) at 1614.* Prosecution history estoppel is one limitation on the scope of equivalents that a patentee can claim under the doctrine of equivalents, see *Warner-Jenkinson, 520 U.S. at 30, 41 U.S.P.Q.2D (BNA) at 1871-72,* and is a question of law, see *Cybor Corp., 138 F.3d at 1460, 46 U.S.P.Q.2D*

(BNA) at 1178. Prosecution history estoppel can occur as a result of (i) amendments made to overcome patentability rejections or (ii) arguments made during prosecution that show "a clear and unmistakable surrender of subject matter." *Sextant Avionique, S.A. v. Analog Devices, Inc., 172 F.3d 817, 828 & 828 n.3, 49 U.S.P.Q.2D (BNA) 1865, 1872 & 1872 n.3 (Fed. Cir. 1996);* see also *Loral Fairchild Corp. v. Sony Corp., 181 F.3d 1313, 1322, 50 U.S.P.Q.2D (BNA) 1865, 1870-71 (Fed. Cir. 1999).*

In addressing whether there was a genuine issue of material fact as to infringement by Elan under the doctrine of equivalents, the district court looked to see whether prosecution history estoppel prevented Bayer from claiming a SSA beyond the upper limit of 4 m2/g set forth in claim 1 of the *'446* patent. See *Bayer, 64 F. Supp. 2d at 1301.* In that connection, the court examined the entire prosecution history of the *'446* patent to determine what subject matter, if any, a competitor would reasonably conclude was surrendered by Bayer. See *id. at 1301-02.* The court noted that, during prosecution, Bayer argued that the SSA range of 0.5 to 6 m2/g originally claimed in claim 1 provided unexpected results, but the examiner did not agree. See *id. at 1302.* The court further noted that, in response to the examiner's rejection of claim 1 under *35 U.S.C. § 112* and claims 1 through 4 under *35 U.S.C. § 103,* Bayer amended claims 1 through 3 by changing the SSA range to 1.0 to 4 m2/g and canceled claim 4.[7] See id. The district court also

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7. The § 103 rejection was based on prior art that showed methods for grinding crystals to produce crystals of lower SSAs. (Cont'd)

considered declarations submitted by Bayer, as well as arguments made by Bayer's attorney, to support Bayer's claim of an unexpected, plateau-like effect for a SSA range of 1.0 to 4 m2/g, with high bioavailability dropping off outside this range. See id. Based on this evidence, the district court determined, as a matter of law, that Bayer had surrendered subject matter outside the claimed range of 1.0 to 4 m2/g. See *id. at 1304.*

2. Bayer argues that the amendment changing the SSA ranges in claims 1, 2, and 3 from a SSA range of 1.0 to 6 m2/g to a SSA range of 1.0 to 4 m2/g was in response to the examiner's § 112, P1 rejection, a rejection purportedly unrelated to patentability. Bayer contends that it explicitly stated, in its January 21, 1985 amendment, that the reason for the amendment was to overcome the § 112, P1 rejection. Bayer further states that the amendment did not address the obviousness rejection, which pertained to the lower end of the SSA range, where the prior art cited by the examiner only taught SSAs below 0.5 m2/g.

Bayer also contends that the district court erred in failing to address a factual question — who the "reasonable competitor" is and what a reasonable competitor would

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(Cont'd)
The examiner noted that since he had raised a prima facie case of obviousness, Bayer needed to rebut with evidence to "show that 'Nifedipine crystals' of the claimed invention show unexpectedly superior properties of the 'Nifedipine crystals' of the prior art references." The examiner entered the § 112 rejection after determining that claim 1 lacked clear support and antecedent basis in the specification. See *35 U.S.C. § 112,* P1.

conclude from reviewing the *'446* patent's prosecution history. Bayer asserts that it presented uncontroverted evidence, through the declaration of Karl F. Jorda, a professor of patent law, that a reasonable competitor would have no basis for concluding from the prosecution history that Bayer gave up the SSA range of 4.0 to 6 m2/g. At a minimum, Bayer contends, the Jorda declaration creates a genuine issue of material fact that precludes summary judgment.

Elan responds that, during prosecution, Bayer repeatedly represented that the SSA range of 1.0 to 4 m2/g was unique and provided unexpected results. Through declarations and attorney argument, Elan asserts, Bayer indicated that there was a special plateau effect between 1.0 to 4 m2/g and that there was a decreasing dissolution rate into the blood with nifedipine crystals with SSAs above 4 m2/g. Elan contends that Bayer, through its statements before the PTO, placed too much emphasis on the inventive nature of the SSA range of 1.0 to 4 m2/g to now be able to seek protection under the doctrine of equivalents for SSAs above 4 m2/g.

3. We need not resolve the question of why Bayer amended its claims and whether its reasons related to patentability because it is clear that, regardless of why it amended its claims, when it did so it unmistakably surrendered coverage to SSAs above 4 m2/g. As a result, it is precluded from asserting that the nifedipine composition that is the subject of Elan's ANDA infringes the *'446* patent under the doctrine of equivalents. The district court did not err in granting summary judgment of no infringement under the doctrine of equivalents.

Appendix A

"Unmistakable assertions made by the applicant to the . . . PTO . . . in support of patentability, whether or not required to secure allowance of the claim, . . . may operate to preclude the patentee from asserting equivalency . . . ." *Texas Instruments Inc. v. United States Int'l Trade Comm'n, 988 F.2d 1165, 1174, 26 U.S.P.Q.2D (BNA) 1018, 1025 (Fed. Cir. 1993);* see also *Litton Sys., Inc. v. Honeywell, Inc., 140 F.3d 1449, 1462, 46 U.S.P.Q.2D (BNA) 1321, 1327 (Fed. Cir. 1998); Coleco Indus., Inc. v. United States Int'l Trade Comm'n, 65 C.C.P.A. 105, 573 F.2d 1247, 1256-57, 197 U.S.P.Q. (BNA) 472, 479-80 (CCPA 1978).* In determining whether there has been a clear and unmistakable surrender of subject matter, the prosecution history must be examined as a whole. See *Pharmacia & Upjohn Co. v. Mylan Pharms., Inc., 170 F.3d 1373, 1376, 50 U.S.P.Q.2D (BNA) 1033, 1036 (Fed. Cir. 1999).* An objective standard is applied when looking at the prosecution history, the proper inquiry being "whether a competitor would reasonably believe that the applicant had surrendered the relevant subject matter." *Cybor, 138 F.3d at 1457, 46 U.S.P.Q.2D (BNA) at 1175* (citing *Insituform Techs., Inc. v. Cat Contracting, Inc., 99 F.3d 1098, 1107-08, 40 U.S.P.Q.2D (BNA) 1602, 1608 (Fed. Cir. 1996)).*

We conclude that a competitor looking at the prosecution history as a whole would reasonably believe that Bayer surrendered SSAs above 4 m2/g. First, before the PTO, Bayer made affirmative statements about the superiority of the 1.0 to 4 m2/g SSA range. After amending its claims to cover a SSA range of 1.0 to 4 m2/g, Bayer asserted that it claimed "a special form of nifedipine, namely, having a specific surface area of 1.0 to 4 m2/g," and it stated that 1.0 to

4 m2/g was a superior, inventive range. Thereafter, Bayer cited an article that supported the proposition that "the claimed upper limit of 4 m2/g is a reasonable upper limit for obtaining a long lasting formulation," i.e., high bioavailability. At the same time, Bayer stated, "The inventive selection of the claimed specific surface area, together with advantageous plateau activity, . . . support the inventive nature of the present application." Then, in its brief to the Board of Patent Appeals and Interferences on September 26, 1986, Bayer argued that nifedipine crystals with a SSA range of 1.0 to 4 m2/g provided the "peculiar" effect of maintaining a high blood level of nifedipine for a long period of time.

Bayer also made arguments to the PTO through the declarations it filed in support of its claim of "unexpected results." In a March 24, 1985 declaration, Dr. Eduard Porges, the head of analytical activities for one of Bayer AG's divisions, referred to "the unexpected, plateau-like effect in dissolution testing of the inventive Nifedipine crystals having a SSA of 1 to 4 m2/g." Dr. Porges concluded that a SSA range of 1.0 to 4 m2/g showed high dissolution rates, while SSAs below 1 m2/g and above 4 m2/g showed "a decreasing dissolution rate." Dr. Porges filed another declaration on October 8, 1986 that reiterated the same finding — that a SSA range of 1.0 to 4 m2/g demonstrated a high dissolution rate, while SSAs outside that range did not. During prosecution, Bayer also submitted the declaration of Andreas Ohm, an employee in Bayer AG's Pharmaceutical Technology department. The Ohm declaration described, graphically and in text, the important plateau-like effect, noting the high percentage of nifedipine released after sixty

minutes if the SSA of the nifedipine crystals was between 1.0 to 4 m2/g. Finally, in response to the examiner's last substantive rejection stating that there was insufficient data to support Bayer's assertion that a SSA range beyond 1.3 to 3.1 m2/g would function in an improved manner over the prior art, Bayer presented the declaration of Klemens Leopold Lustig, head of Bayer AG's pharmacokinetics laboratory. In his declaration, Dr. Lustig concluded that concentrations of nifedipine in blood plasma in dogs were higher when using nifedipine crystals between 0.99 to 4.05 m2/g.

In short, through its statements to the PTO and the declarations it filed, Bayer made statements of clear and unmistakable surrender of subject matter outside the claimed SSA range of 1.0 to 4 m2/g. Bayer repeatedly argued that its claimed range of 1.0 to 4 m2/g produced unique results and was a superior and inventive range. At the same time, the declarations it submitted praised the benefits of the 1.0 to 4 m2/g SSA range, claiming that this range exhibited a plateau-like effect by producing the maximum dissolution of nifedipine into the blood. Bayer also asserted that there were disadvantages to SSAs outside the claimed range. Dr. Porges specifically stated that SSAs below 1.0 m2/g and above 4 m2/g had "a decreasing dissolution rate." All of these statements were made to further Bayer's claim that its claimed range produced unexpected results.

Statements such as Bayer's have led to "clear and unmistakable surrender" before. This case is very similar to Pharmacia. There, we concluded that a patentee had relinquished claim coverage to any type of lactose that was not spray-dried. See *Pharmacia, 170 F.3d at 1376-79,*

50 U.S.P.Q.2D (BNA) at 1037-38. During prosecution, the patentee argued that the use of spray-dried lactose was "a critical feature" of the claimed invention and that using lactose that was not spray-dried resulted in a pharmaceutical powder that was not readily processed. *Id. at 1377, 50 U.S.P.Q.2D (BNA) at 1037-38.* We held that these statements were "reasonably interpreted as a broad disclaimer of what the invention was not." *Id. at 1378, 50 U.S.P.Q.2D (BNA) at 1037.* Similarly, in Texas Instruments, an emphasis by the patentee, during prosecution, on what was termed "opposite-side gating" (placing the gate on the opposite side of the mold cavity from the semiconductor device) led to a "clear and unmistakable surrender." *Texas Instruments, 988 F.2d at 1174-75, 26 U.S.P.Q.2D (BNA) at 1025-26.* During prosecution, the patentee stated that placing the gate on the same side of the mold cavity, termed "same-side gating," would make its invention, covering a process for encapsulating electronic components in plastic, unworkable. See *id. at 1174, 26 U.S.P.Q.2D (BNA) at 1025.* The patentee also argued, in response to an obviousness rejection, that using opposite-side gating, as opposed to same-side gating, made the invention patentable. See *id. at 1174-75, 26 U.S.P.Q.2D (BNA) 1026.* In view of the statements that same-side gating was disadvantageous and opposite-side gating was not taught in the prior art, we determined that Texas Instruments had given up the ability to assert that same-side gating was equivalent to opposite-side gating. See id. In this case, during prosecution, Bayer emphasized the inventive nature of its claimed SSA range and the disadvantages of SSAs outside its claimed range. Thus, Bayer's statements, in total, amount to a "clear and unmistakable surrender," so that a competitor would

reasonably believe that Bayer had surrendered SSAs outside the claimed range.

Finally, we must reject Bayer's argument that the declaration of Professor Jorda creates a genuine issue of material fact with respect to how a competitor would reasonably view the *'446* patent's prosecution history. As noted above, Professor Jorda stated in his declaration that a reasonable competitor would have no basis for concluding, from the prosecution history, that Bayer gave up the SSA range of 4.0 to 6 m2/g.

"The standard for determining whether particular subject matter was relinquished . . . is an objective one which we determine as a matter of law." *Modine Mfg. Co. v. United States Int'l Trade Comm'n, 75 F.3d 1545, 1555-56, 37 U.S.P.Q.2D (BNA) 1609, 1616 (Fed. Cir. 1996)* (citing *LaBounty Mfg., Inc. v. United States Int'l Trade Comm'n, 867 F.2d 1572, 1576, 9 U.S.P.Q.2D (BNA) 1995, 1998 (Fed. Cir. 1989))*. Prosecution history estoppel is a "legal matter . . . guided by equitable and public policy principles underlying the doctrines involved and by the facts of the particular case." *Loctite Corp. v. Ultraseal Ltd., 781 F.2d 861, 871 n.7, 228 U.S.P.Q. (BNA) 90, 96 n.7 (Fed. Cir. 1985),* overruled on other grounds, *Nobelpharma AB v. Implant Innovations, Inc., 141 F.3d 1059, 46 U.S.P.Q.2D (BNA) 1097 (Fed. Cir. 1998)*. One of the public policy principles underlying the doctrine is that "other players in the marketplace are entitled to rely on the record made in the Patent Office in determining the meaning and scope of the patent." *Lemelson v. General Mills, Inc., 968 F.2d 1202,*

1208, 23 U.S.P.Q.2D (BNA) 1284, 1289 (Fed. Cir. 1992). Having prosecution history estoppel as a purely legal issue is consistent with fostering certainty as to a patent's scope, a consideration that is important for reliance by those in the marketplace. See, e.g., *Markman v. Westview Instruments Inc., 517 U.S. 370, 391, 38 U.S.P.Q.2D (BNA) 1461, 1470-71, 134 L. Ed. 2d 577, 116 S. Ct. 1384 (1996)* (reasoning that allowing claim construction to be a question of law promotes both uniformity and certainty in the meaning of a patent's claims). To allow a particular part of the prosecution history estoppel inquiry (such as the matter of what a reasonable competitor would conclude was surrendered during prosecution) to be a question of fact would hamper the promotion of uniformity by binding this court to the deference required with respect to fact findings at the trial level. See, e.g., *Cybor, 138 F.3d at 1455, 46 U.S.P.Q.2D (BNA) at 1173-74* (noting that if claim construction had underlying factual inquiries, the goal of national uniformity would be frustrated). Consequently, testimony as to what a reasonable competitor would conclude from the prosecution history cannot create a genuine issue of material fact so as to bar summary judgment. Such testimony is only a tool, which the judge can use at his or her discretion, to aid in the legal determination of prosecution history estoppel.

CONCLUSION

The district court properly granted summary judgment that Elan does not literally infringe the *'446* patent. The district court also properly granted summary judgment that

Appendix A

Elan does not infringe the *'446* patent under the doctrine of equivalents because during prosecution Bayer clearly and unmistakably gave up claim coverage for nifedipine crystals having SSAs greater than 4 m2/g. The court's judgment in favor of Elan is therefore

AFFIRMED.

APPENDIX B — ORDER AND JUDGMENT OF THE UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF GEORGIA, GAINESVILLE DIVISION DATED, DECIDED AND FILED MARCH 16, 1999

BAYER AG and BAYER CORP.,

Plaintiffs,

v.

ELAN PHARMACEUTICAL RESEARCH CORPORATION and ELAN CORPORATION, PLC,

Defendants.

CIVIL NO. 2:97-CV-143-WCO

UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF GEORGIA, GAINESVILLE DIVISION

* * *

March 16, 1999, Decided

March 16, 1999, Filed

* * *

JUDGES:
WILLIAM C. O'KELLEY, Senior United States District Judge.

Appendix B

OPINION BY:
WILLIAM C. O'KELLEY

OPINION:

ORDER

The captioned case is before the court for consideration of two motions by defendants Elan Pharmaceutical Research Corporation and Elan Corporation, plc, ("Elan"): a motion for summary judgment [49-1] and a motion to file excess pages [102-1].[1]

I. Motion to File Excess Pages

Elan filed a motion to allow the filing of a reply memorandum in support of its motion for summary judgment which is five pages in excess of the page limit set forth in the local rules. This request will result in Elan's being granted the same number of additional pages as Bayer. Elan's motion is hereby GRANTED, and the court will consider the entirety of the reply brief in its consideration of the submitted summary judgment motion.

II. Summary Judgment Motion

Plaintiffs Bayer AG and Bayer Corporation ("Bayer") hold U.S. Patent No. *5,264,446* (" *'446* patent") for a high

1. These motions were originally filed by EPRC. After Bayer amended its complaint to add Elan as a party, Elan joined EPRC's motions. (Elan's September 14, 1998 Motions to Join.)

blood pressure drug, Adalat CC(C). The invention described and claimed in the *'446* patent centers on a solid pharmaceutical formulation containing a therapeutically effective amount of crystals of an active ingredient called nifedipine. The *'446* patent provides that when relatively small crystals of nifedipine, defined by their specific surface area ("SSA"),[2] are combined with a solid diluent, the resulting compositions produce a sustained release of active nifedipine into the bloodstream.

Once the FDA approves a new drug, generic versions may be developed. Congress enacted legislation to expedite U.S. Food and Drug Administration ("FDA") approval of generic drugs in order to increase the supply of affordable drugs. A generic drug manufacturer is required to submit an Abbreviated New Drug Application ("ANDA"), giving detailed information about its generic product including its precise formulation, details about how it will be manufactured, and data showing that it is "bioequivalent" to the approved drug. *21 U.S.C. § 355*(j).

If a generic drug manufacturer files an ANDA seeking approval to make a generic version of a drug claimed to be covered by a patent, the generic drug manufacturer must certify either that the generic drug will not enter the market before the patent's expiration date or that the patent is "invalid or will not be infringed by the manufacture, use, or sale of the drug for which the [ANDA] is submitted."

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2. SSA is the total surface area of all the individual particles per unit weight, expressed in square meters of surface per gram of crystals of "m<2>/g." SSA is generally inversely proportional to particle size — the larger the particles, the smaller the SSA.

21 U.S.C. § 355(j)(2)(A)(vii)(III)-(IV). In such a case, the applicant must also notify the patent holder and state why the patent is not valid or will not be infringed. *21 U.S.C. § 355*(j)(2)(B)(ii). If the patent holder disagrees with the certification, it has 45 days to sue the ANDA applicant for infringement under *35 U.S.C. § 271*(e)(2). The filing of a suit suspends FDA approval of the proposed generic drug until the earlier of the court's resolution of the correctness of the ANDA applicant's certification of noninfringement or thirty months from the receipt of the notice.

In its complaint, Bayer alleges that Elan infringed the *'446* patent under *35 U.S.C. § 271*(e)(2) by filing an ANDA seeking FDA approval of a generic version of Bayer's Adalat CC(C). Section *35 U.S.C. § 271*(e)(2) provides that it is "an act of infringement to submit [an ANDA] . . . for a drug claimed in a patent or the use of which is claimed in a patent before the expiration of such patent." In its summary judgment motion, Elan argues that it has not infringed Bayer's patent because: (1) the SSA of Elan's nifedipine crystals, allegedly greater than 5m<2>/g, is above the literal upper limit of Bayer's claimed range of 1 to 4m<2>/g, and (2) the history of Bayer's prosecution of its claims in the U.S. Patent and Trademark Office ("PTO") estops Bayer from now asserting the doctrine of equivalents to cover Elan's drug.

A. Summary Judgment Standard

Summary judgment shall be granted "if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is

no genuine issue as to any material fact and that the moving party is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(c). Only those claims for which there is no need for a factual determination and for which there is a clear legal basis are properly disposed of through summary judgment. *Celotex Corp. v. Catrett, 477 U.S. 317, 91 L. Ed. 2d 265, 106 S. Ct. 2548 (1986).* It is well settled that a court considering a motion for summary judgment must view the evidence in a light most favorable to the non-moving party. *See*, e.g., *Samples v. City of Atlanta, 846 F.2d 1328, 1330 (11th Cir. 1988).* It is important to recognize, however, that this principle does not require the parties to concur on every factual point. Rule 56 "by its very terms . . . provides that the mere existence of some alleged factual dispute between the parties will not defeat an otherwise properly supported motion for summary judgment; the requirement is that there be no genuine issue of material fact." *Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 247-8, 91 L. Ed. 2d 202, 106 S. Ct. 2505 (1986).*

Summary judgment is equally available in a patent case, *Brenner v. United States, 773 F.2d 306, 307 (Fed. Cir. 1985),* although "[a] district court should approach a motion for summary judgment on the fact issue of infringement with great care." *Amhil Enterprises Ltd. v. Wawa, Inc., 81 F.3d 1554, 1557 (Fed. Cir. 1996).* Summary judgment is appropriate in patent infringement suits "where the claims do not 'read on' the accused structure" for literal infringement purposes "and a prosecution history estoppel makes clear that no actual infringement under the doctrine of equivalents can be found." *Townsend Engineering Co. v. Hitec Co., Ltd., 829 F.2d 1086, 1089 (Fed. Cir. 1987)* (quoting *Brenner, 773 F.2d at 307).*

Appendix B

B. Infringement

Notwithstanding that *35 U.S.C. § 271*(e)(2) provides patentees with a defined act of infringement enabling a court to promptly resolve disputes concerning infringement, a district court's inquiry in a suit brought under Section 271(e)(2) is the same as it is in any other infringement suit. *Glaxo, Inc. v. Novopharm, Ltd., 110 F.3d 1562, 1569 (Fed. Cir. 1997).* The difference is that the allegedly infringing drug has not yet been marketed; therefore, the infringement determination focuses on what the ANDA applicant will likely market if its application is approved. Id. "Under § 271(e)(2)(A), a court must determine whether, if the drug were approved based upon the ANDA, the manufacture, use, or sale of that drug would infringe the patent in the conventional sense." Id.

Patent infringement occurs when an invention that is literally covered by the claims of a patent, or is equivalent to the claimed subject matter, is made, used, or sold during the term of the patent without authorization. *35 U.S.C. § 271.* A determination that a patent is infringed involves a two-stage process. *Novopharm, 110 F.3d at 1565; Markman v. Westview Instruments, Inc., 52 F.3d 967, 976 (Fed. Cir. 1995), aff'd, 517 U.S. 370, 134 L. Ed. 2d 577, 116 S. Ct. 1384 (1996).* First, the claim is properly construed to determine its scope and meaning. Id. Claim construction is a matter of law, based upon the claim language, the specification, the prosecution history, and necessary extrinsic evidence. *Novopharm, 110 F.3d at 1565; Markman, 52 F.3d at 979.* Claims are construed through the eyes of the person of ordinary skill in the field of the invention. *Multiform*

Desiccants, Inc. v. Medzam, Ltd., 133 F.3d 1473, 1477 (Fed. Cir. 1998). Second, the claim as properly construed is compared to the accused device or process. *Novopharm, 110 F.3d at 1565; Markman, 52 F.3d at 976.* Whether an accused product infringes upon patent claims is a question of fact. *Novopharm, 110 F.3d at 1565.*

1. Literal Infringement

To prove literal infringement, a patentee must show that every limitation of the claims which he alleges to have been infringed is found in the accused device, i.e., "when the properly construed claim reads on the accused device exactly." *Amhil Enter., 81 F.3d at 1562.* "If an express limitation is absent from the accused product, there can be no literal infringement as a matter of law." *Wolverine World Wide, Inc. v. Nike, Inc., 38 F.3d 1192, 1199 (Fed. Cir. 1994).*

Bayer's *'446* patent includes twelve claims, each of which requires "an effective amount of nifedipine crystals with a specific surface area" within a certain range. Claims 1 through 4 define the range as 1.0 to 4m<2>/g; claims 5 through 8 define the range as "about 1.2 to 3.6 m<2>/g; claims 9 through 12 define the range as 1.3 to 3.1m<2>/g. The only measurement methods taught in the *'446* patent are BET measurements made on the batch of starting raw material. Elan's ANDA sets a specification for its proposed product of a specific surface area greater than 5m<2>/g. Elan's supplier of nifedipine is Arzneimittelwerk Dresden GmbH ("AWD"). Elan has provided evidence that AWD's requirements do not allow the sale of nifedipine under 4.7m<2>/g to customers for use in products sold in the U.S.

Furthermore, Elan offers a certified test of the nifedipine used in its batch of tablets showing a SSA of 6.15m<2>/g.

Although from the above information it would seem clear that Elan's proposed product would not literally infringe Bayer's, Bayer argues that there is no certainty that Elan's ANDA specification and AWD's internal requirements will not change in the future and also contends that the physical sample provided by Elan is not persuasive because Elan is still revising its product. Bayer also points out that nifedipine crystals may increase in size over time, diminishing their SSA. However, it is not enough for Bayer to suggest that the accused product may be infringing at some point in the future. The relevant test is whether Elan's drug, if it were put on the market, *would* infringe Bayer's patent. *See, e.g., Glaxo Inc. v. Novopharm Ltd., 931 F. Supp. 1280, 1286 (E.D.N.C. 1996), aff'd, 110 F.3d 1562 (Fed. Cir. 1997),* ("If the Court cannot conclude that the accused pharmaceutical product would infringe the relevant patent, it is left with what is at best a hypothesis that the product might be infringing. The patent owner's unproven assertion — which is just a guess — cannot warrant invocation of the Court's injunctive powers."); *Glaxo Inc. v. Boehringer Ingelheim Corp., 954 F. Supp. 469, 474 (D. Conn. 1996).* Nothing about *35 U.S.C. § 271*(e)(2) alters the patentee's burden of proving infringement; the patentee has the burden of showing that the product that Elan would likely sell following FDA approval would likely infringe its patent. *Novopharm, 110 F.3d at 1567-68.* Here, Bayer has offered no such evidence. Bayer's unsubstantiated assertions can not form the basis for a literal infringement claim. The court therefore finds that Elan's proposed product does not literally infringe Bayer's patent.

The court's determination as to literal infringement does not leave Bayer without a remedy, however, should its fears someday prove merited. If Elan commences to manufacture a product with a SSA within the range claimed in Bayer's patent, Bayer may then bring an infringement action against Elan. *Boehringer Ingelheim, 954 F. Supp. at 474-75.*

2. Doctrine of Equivalents

When literal infringement is not established, infringement may be proven under the doctrine of equivalents when there is not a substantial difference between the elements of the patented invention and those of the accused product. *Pall Corp. v. Micron Separations, Inc., 66 F.3d 1211, 1218 (Fed. Cir. 1995).* This determination is a question of fact, *Insituform Tech., Inc. v. Cat Contracting, Inc., 99 F.3d 1098, 1107 (Fed. Cir. 1996),* taken from the perspective of one of ordinary skill in the relevant art. *Athletic Alternatives, Inc. v. Prince Mfg., Inc., 73 F.3d 1573, 1581 (Fed. Cir. 1996).* Under this doctrine, an accused device infringes if it performs substantially the same function in substantially the same way to obtain substantially the same result as the claimed invention. *Conroy v. Reebok Int'l, Ltd. 14 F.3d 1570, 1574 (Fed. Cir. 1994).*

The doctrine of equivalents is not a license to ignore the claim's limitations "on which the public is entitled to rely." *Perkin-Elmer Corp. v. Westinghouse Elec. Corp., 822 F.2d 1528, 1532 (Fed. Cir. 1987).* Liability under this doctrine also requires an accused product to contain each limitation in the patent or its equivalent. *Athletic Alternatives, 73 F.3d at 1581.* The doctrine of equivalents is limited, however, in

that it cannot be used to protect subject matter which is obvious in light of the prior art, *Wilson Sporting Goods Co. v. David Geoffrey & Assocs., 904 F.2d 677, 684 (Fed. Cir. 1990),* nor to recapture subject matter that was relinquished during prosecution of the patent. *Hoganas AB v. Dresser Indus., Inc., 9 F.3d 948, 951-52 (Fed. Cir. 1993).*

The latter limitation, termed prosecution history estoppel, is at issue in this summary judgment motion — Elan argues in its motion that Bayer is estopped by this principle from asserting the doctrine of equivalents as to Elan's product. Prosecution history estoppel limits the determination of infringement by an otherwise equivalent product by barring recapture by the patentee of subject matter that was surrendered during prosecution in order to promote allowance of the claims. *Litton Sys., Inc. v. Honeywell, Inc., 140 F.3d 1449, 1455 (Fed. Cir. 1998).*

The application of this doctrine is a question of law. *Mark I Mktg. Corp. v. R.R. Donnelley and Sons Co., 66 F.3d 285, 291 (Fed. Cir. 1995).* Invocation of the doctrine requires a close examination of what was surrendered by the patentee and also the reason for such a surrender. *Hormone Research Found., Inc. v. Genentech, Inc., 904 F.2d 1558, 1564 (Fed. Cir. 1990).* In determining whether particular subject matter was relinquished, the court does not look to the subjective intent of the applicant, but rather to what a competitor reasonably would conclude from the patent's prosecution history. *Mark I, 66 F.3d at 291.*

The prosecution history relevant to this case, which stretches from approximately August 1981 to November

1993 and fills three large volumes, is long and complex. As originally filed in the PTO, Bayer's *'446* patent application described its invention as containing nifedipine crystals with a SSA of 0.5 to 6m<2>/g and described compositions with crystals having a SSA of 1 to 4m<2>/g as "particularly advantageous". Seven claims were originally presented, reciting two SSA ranges: "0.5 to 6m<2>/g" (claims 1-3 and 6-7) and "1.0 to 4m<2>/g" (claims 4-5). The patent examiner rejected Bayer's claims as invalid because of prior art and also stated that "techniques such as grinding or sieving are conventional in the pharmaceutical arts to reduce crystalline materials to coarse or fine powders which inherently increases surface area." Bayer argued that the claimed SSA ranges provided unexpected results; the examiner did not agree. Bayer amended its claim to raise the lower point of the original range of claim 1 from "0.5 to 6m<2>/g" to "1.0 to 6m<2>/g", arguing that the prior art involved crystals with a SSA smaller than 1m<2>/g and that the new claimed range had a "plateau of activity." The examiner rejected the claim under *35 U.S.C. § 112* on the grounds that the new range lacked clear support and antecedent basis in the specification. The examiner also continued to reject the remaining claims as unpatentable under *35 U.S.C. § 103*. To address the examiner's rejection, Bayer changed the SSA range from "1.0 to 6m<2>/g" to "1.0 to 4m<2>/g." Bayer submitted evidence, attempting to demonstrate "unexpected results," to support a patent. Bayer submitted a declaration of Dr. Porges, showing the unexpected, plateau-like effect of crystals with a SSA of 1.0 to 4m<2>/g. The rejection by the PTO continued through the appeals board, who reversed the grounds of rejection stated by the examiner but set forth a new rejection based on obviousness. In response to the

examiner's position that reducing crystal size was not patentable, Bayer argued, "The present invention is not concerned with nifedipine per se, but a special form of nifedipine, namely, having a specific surface area of 1 to 4m<2>/g. Such a surface area is not taught or suggested" by the prior art. Bayer contended that all prior art had SSA smaller than 1m<2>/g and that the upper limit of 4m<2>/g was of importance because above that limit "such nifedipine-dust can only be worked up with great difficulties to form tablets." In 1990, Bayer's attorney held an interview with the examiner, who agreed to allow Bayer's claims if they were amended to recite a SSA of 1.3 to 3.1m<2>/g, representing the high and low values which Bayer had tested in human beings and submitted to the PTO. Bayer continued prosecution, presenting claims with ranges of 1.0 to 4m<2>/g. The examiner asked for data showing that the full scope of this range possessed superior properties over the prior art. In response to the examiner's request, Bayer submitted new data, all within the 1.0 to 4m<2>/g range. The examiner found that the data adequately supported the range, and the *'446* patent finally issued. Bayer never submitted additional test data or continued prosecution to broaden its claims beyond the SSA of 1.0 to 4m<2>/g.

In support of its prosecution history estoppel argument, Elan offers three grounds which it suggests are "independent": (1) Bayer's failure to submit evidence of unexpected results and its cancellation of claims beyond 1.0 to 4m<2>/g (i.e., failure to prosecute); (2) Bayer's continued argument to the PTO during prosecution that the range of 1.0 to 4m<2>/g was significant; and (3) Bayer's amendment of its range from 0.5 to 6m<2>/g to 1.0 to 4m<2>/g.

However, rather than breaking up the underlying events into disparate segments, the estoppel determination should be "based on the reasonable reading, by a person of skill in the field of the invention, of the entire prosecution history." *Modine Mfg. Co. v. United States Int'l Trade Comm'n, 75 F.3d 1545, 1555-56 (Fed. Cir. 1996). See also EMI Group North America, Inc. v. Intel Corp., 157 F.3d 887, 897-98 (Fed. Cir. 1998)* (considering the prosecution history as a whole, including the patent holder's arguments, canceled claims, and amendments, in its estoppel decision); *Litton Sys., 140 F.3d at 1462* ("applicants commonly make arguments in combination with an amendment. . . . In such circumstances, the scope of estoppel is a product of the effects of both factors working in concert."); *Mark I, 66 F.3d at 292* ("the prosecution history must be viewed as a whole to determine whether and what subject matter was surrendered to procure issuance of the patent"). Therefore, the court will consider Elan's purportedly "independent" grounds of prosecution history estoppel as a whole rather than in isolation.

Prosecution history estoppel applies both "to claim amendments to overcome rejections based on prior art, and to arguments submitted to obtain the patent." *Hughes Aircraft Co. v. U.S., 717 F.2d 1351, 1362 (Fed. Cir. 1983).* "That is not to say, however, that, whenever a limiting amendment or argument is made during prosecution, the patentee loses all coverage between what the claims literally cover and what they would have covered prior to the amendment or argument." *Hormone Research Found., 904 F.2d at 1564.* Depending on the amendment or argument's nature and purpose, it may have a limiting effect within a spectrum

ranging from great to small to zero." *Hughes Aircraft Co., 717 F.2d at 1363.* Both the character of the assertions made and the result of those assertions (i.e., whether they result in allowance) are examined in determining whether an estoppel is created. *Southwall Tech., Inc., 54 F.3d 1570 at 1583.*

When an amendment was made by an applicant during its patent prosecution, the patentee bears the burden of establishing a reason for the amendment which is sufficient to overcome prosecution history estoppel. *Warner-Jenkinson Co., Inc. v. Hilton Davis Chem. Co., 520 U.S. 17, 117 S. Ct. 1040 at 1051, 137 L. Ed. 2d 146.* In other words, if the patent owner cannot state a reason for the amendment other than patentability, the court should presume that the reason is such that estoppel would apply.

Bayer argues that its amendment changing the SSA range was not related to prior art and patentability but rather was an answer to the PTO's Section 112 rejection concerning the lack of antecedent basis in the specification for the newly claimed range of 1.0 to 4.0 m<2>/g. In its brief, Bayer explains this argument:

> Bayer originally claimed a range of "0.5 to 6m<2>/g" in Claim 1. Subsequently, to further distance itself from the prior art, the lower end of this range was raised from 0.5 to 1.0m<2>/g. The PTO rejected the new range of 1.0 to 6m<2>/g in claim 1 as lacking support and antecedent basis in the specification. . . . The only ranges explicitly stated in the specification were 0.5 to 6m<2>/g and 1 to 4m<2>/g. These ranges, the examiner

> concluded, did not provide clear support and antecedent basis for the new claimed range of 1 to 6m<2>/g in Bayer's amendment. Thus, Bayer further amended claim 1 (as well as claims 2 and 3) to recite the latter range of 1 to 4m<2>/g, which is literally in the specification. Bayer unequivocally stated that the upper end of the range was lowered to comply with the antecedent basis rule promulgated by the PTO pursuant to the first paragraph of *35 U.S.C. § 112:*
>
> > In view of the above amendments, applicants believe the rejection of claim 1 under *35 U.S.C. § 112* (first paragraph) has been obviated and withdrawal of such rejection is respectfully solicited.

(Bayer's Response Brief at 17 n.16 (citations omitted)). Bayer argues that its amendment in response to the PTO's Section 112 rejection did not generate estoppel.

Elan makes several arguments in response. First, in the sentence following its Section 112 rejection, the PTO continued to reject Bayer's patent as unpatentable under Section 103 (Elan's Reply Brief at 12-13). Second, Bayer's argument that the PTO's rejection was merely formalistic is belied by the fact that Bayer sought and obtained claims with SSA ranges of 1.3 to 3.1m<2>/g which range was never explicitly stated in the original application (Id. at 13 n.7).

Elan further argues that Bayer's failure to offer data to the PTO showing unexpected results for crystals with a SSA greater than 4m<2>/g and the cancellation of its broader

claims constituted a failure to prosecute leading to estoppel of Bayer's claim under the doctrine of equivalents. In Haynes Int'l, Inc. v. Jessop Steel Co., the Court held that estoppel could be created by a patentee's failure to continue prosecution to obtain claims broader than those issued when the broader claims were rejected by the PTO based on the prior art. *See also Insta-Foam Prod., Inc. v. Universal Foam Sys., Inc., 906 F.2d 698, 703 (Fed. Cir. 1990)* (holding that patentee's abandonment of claims did not form a basis for prosecution history estoppel when it was not abandoned because of the PTO's rejection based on prior art). Again, Bayer responds that its failure to prosecute broader claims is not subject to estoppel on this basis because the PTO's rejection of the broader range was not based on the prior art.

The court agrees with Elan that although the PTO based its rejection of Bayer's claims in part under Section 112, it simultaneously reiterated its rejection of the claims under Section 103. Furthermore, prosecution history estoppel is not limited only to embodiments shown in the prior art, *Wang Labs., Inc. v. Toshiba Corp., 993 F.2d 858, 867-68 (Fed. Cir. 1993).* An amendment made for reasons other than patentability can give rise to an estoppel if it "evinces an unmistakable surrender." *Litton Sys., Inc., 140 F.3d at 1458.* Likewise, arguments to the patent office will create estoppel if they are sufficient to evince a clear and unmistakable surrender of the subject matter. *Litton Sys., Inc., 140 F.3d at 1458* ("This principle presupposes that the applicant has made the surrender unmistakable enough that the public may reasonably rely on it."); *Hoganas AB, 9 F.3d at 952.* "Unmistakable assertions made by the applicant to the . . . [PTO] in support of patentability, whether or not required to

secure allowance of the claim" may work an estoppel. *Texas Instruments, Inc. v. United States Int'l Trade Comm'n, 988 F.2d 1165, 1174 (Fed. Cir. 1993).* Multiple statements made by Bayer during prosecution of its patent evinced a surrender of crystals beyond the 1.0 to 4m<2>/g SSA range. See supra pp. 10-12. Particularly the court points to Bayer's repeated statement that its claimed range was "particularly advantageous" and exhibited a "plateau effect." Bayer also indicated to the PTO that nifedipine crystals with a SSA higher than about 4m<2>/g showed an unexpectedly decreasing effectiveness.

Examining the prosecution history as a whole and considering the evidence in the light most favorable to Bayer, the court concludes that a competitor reasonably would conclude from the prosecution history that Bayer had relinquished subject matter outside its claimed range of 1.0 to 4m<2>/g. See *Mark I, 66 F.3d at 291.* As the application of the doctrine of prosecution history estoppel is a question of law, this determination is appropriately made at this stage. Id. Elan is therefore entitled to judgment as a matter of law as to its defense of prosecution history estoppel.

Conclusion

In accordance with the above discussion, the court hereby GRANTS Elan's motion to file excess pages [102-1] and GRANTS defendant Elan's motion for summary judgment [49-1].

IT IS SO ORDERED this 16th day of March, 1999.

WILLIAM C. O'KELLEY
Senior United States District Judge

Appendix B

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF GEORGIA
GAINESVILLE DIVISION

CIVIL ACTION NO.: 2:97-cv-143-WCO

Bayer AG and Bayer Corp.

Plaintiffs

vs

Elan Pharmaceutical Research Corporation
and Elan Corporation, PLC,

Defendants

JUDGMENT

This action having come before the court, Honorable William C. O'Kelley, Senior United States District Judge, for consideration of defendants' motion for summary judgment, and the court having granted defendants motion, it is

Ordered and Adjudged that the plaintiffs recover nothing in this action, that the complaint be, and the same hereby is, **dismissed,** and that the defendants, Elan Pharmaceutical Research Corporation and Elan Corporation, PLC, recover of the plaintiffs the costs of this action.

Appendix B

Dated at Gainesville, Georgia, this 16th day of March, 1999.

LUTHER D. THOMAS, CLERK

By: s/ Johnnie Sanders
Deputy Clerk

APPENDIX C — ORDER OF THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT DENYING PETITION FOR REHEARING DATED AND FILED JUNE 22, 2000

United States Court of Appeals
for the Federal Circuit

99-1365

BAYER AG and BAYER CORPORATION,

Plaintiffs-Appellants,

v.

ELAN PHARMACEUTICAL RESEARCH CORPORATION and ELAN CORPORATION, PLC,

Defendants-Appellees.

ORDER

A combined petition for panel rehearing and rehearing en banc having been filed by the APPELLANTS and the petition for rehearing having been referred to the panel that heard the appeal, and thereafter the petition for rehearing en banc having been referred to the circuit judges who are in regular active service,

UPON CONSIDERATION THEREOF, it is

ORDERED that the petition for rehearing be, and the same hereby is, DENIED and it is further

Appendix C

ORDERED that the petition for rehearing en banc be, and the same hereby is, DENIED.

The mandate of the court will issue on June 29, 2000.

FOR THE COURT,

s/ Jan Horbaly
Jan Horbaly
Clerk

Dated: June 22, 2000

APPENDIX D — CONSTITUTIONAL AND STATUTORY PROVISIONS INVOLVED

Constitutional Provisions

United States Constitution;

Article III, Sec. 2, Cl. 1. Subjects of jurisdiction.

The judicial Power shall extend to all Cases, in Law and Equity, arising under this Constitution, the Laws of the United States, and Treaties made, or which shall be made, under their Authority; — to all Cases affecting Ambassadors, other public Ministers and Consuls; — to all Cases of admiralty and maritime Jurisdiction; — to Controversies to which the United States shall be a Party; — to Controversies between two or more States; — between a State and Citizens of another State; — between Citizens of different States, — between Citizens of the same State claiming Lands under Grants of different States, and between a State, or the Citizens thereof, and foreign States, Citizens or Subjects.

U.S. Const. Art. III, § 2, cl. 1.

Statutes

§ 271. Infringement of patent

. . . (e)(1) It shall not be an act of infringement to make, use, offer to sell, or sell within the United States or import into the United States a patented

invention (other than a new animal drug or veterinary biological product (as those terms are used in the Federal Food, Drug, and Cosmetic Act and the Act of March 4, 1913) which is primarily manufactured using recombinant DNA, recombinant RNA, hybridoma technology, or other processes involving site specific genetic manipulation techniques) solely for uses reasonably related to the development and submission of information under a Federal law which regulates the manufacture, use, or sale of drugs or veterinary biological products.

(2) It shall be an act of infringement to submit —

(A) an application under section 505(j) of the Federal Food, Drug, and Cosmetic Act or described in section 505(b)(2) of such Act for a drug claimed in a patent or the use of which is claimed in a patent, or . . .

35 U.S.C.A. § 271(e)(1)-(2) (West 1984 & Supp. 2000).

§ 355. New drugs

. . . (j) Abbreviated application for new drug approval; required information and certification; approval of application; hearing.

Appendix D

(1) Any person may file with the Secretary an abbreviated application for the approval of a new drug.

(2)(A) An abbreviated application for a new drug shall contain —

(i) information to show that the conditions of use prescribed, recommended, or suggested in the labeling proposed for the new drug have been previously approved for a drug listed under paragraph (7) (hereinafter in this subsection referred to as a "listed drug");

(ii)(I) if the listed drug referred to in clause (i) has only one active ingredient, information to show that the active ingredient of the new drug is the same as that of the listed drug; (II) if the listed drug referred to in clause (i) has more than one active ingredient, information to show that the active ingredients of the new drug are the same as those of the listed drug, or (III) if the listed drug referred to in clause (i) has more than one active ingredient and if one of the active ingredients of the new drug is different and the application is filed pursuant to the approval of a petition filed under subparagraph (C), information

to show that the other active ingredients of the new drug are the same as the active ingredients of the listed drug, information to show that the different active ingredient is an active ingredient of a listed drug or of a drug which does not meet the requirements of section 201(p), and such other information respecting the different active ingredient with respect to which the petition was filed as the Secretary may require;

(iii) information to show that the route of administration, the dosage form, and the strength of the new drug are the same as those of the listed drug referred to in clause (i) or, if the route of administration, the dosage form, or the strength of the new drug is different and the application is filed pursuant to the approval of a petition filed under subparagraph (C), such information respecting the route of administration, dosage form, or strength with respect to which the petition was filed as the Secretary may require;

(iv) information to show that the new drug is bioequivalent to the listed drug referred to in clause (i), except that if the application is filed pursuant to the approval of a petition filed under

subparagraph (C), information to show that the active ingredients of the new drug are of the same pharmacological or therapeutic class as those of the listed drug referred to in clause (i) and the new drug can be expected to have the same therapeutic effect as the listed drug when administered to patients for a condition of use referred to in clause (i);

(v) information to show that the labeling proposed for the new drug is the same as the labeling approved for the listed drug referred to in clause (i) except for changes required because of differences approved under a petition filed under subparagraph (C) or because the new drug and the listed drug are produced or distributed by different manufacturers;

(vi) the items specified in clauses (B) through (F) of subsection (b)(1);

(vii) a certification, in the opinion of the applicant and to the best of his knowledge, with respect to each patent which claims the listed drug referred to in clause (i) or which claims a use for such listed drug for which the applicant is seeking approval under this subsection and for which information is

required to be filed under subsection (b) or (c) — (I) that such patent information has not been filed, (II) that such patent has expired, (III) of the date on which such patent will expire, or (IV) that such patent is invalid or will not be infringed by the manufacture, use, or sale of the new drug for which the application is submitted; and

(viii) if with respect to the listed drug referred to in clause (i) information was filed under subsection (b) or (c) for a method of use patent which does not claim a use for which the applicant is seeking approval under this subsection, a statement that the method of use patent does not claim such a use. The Secretary may not require that an abbreviated application contain information in addition to that required by clauses (i) through (viii).

(B)(i) An applicant who makes a certification described in subparagraph (A)(vii)(IV) shall include in the application a statement that the applicant will give the notice required by clause (ii) to —

(I) each owner of the patent which is the subject of the certification or the representative of such owner designated to receive such notice, and

(II) the holder of the approved application under subsection (b) for the drug which is claimed by the patent or a use of which is claimed by the patent or the representative of such holder designated to receive such notice.

(ii) The notice referred to in clause (i) shall state that an application, which contains data for bioavailability or bioequivalence studies, has been submitted under this subsection for the drug with respect to which the certification is made to obtain approval to engage in the commercial manufacture, use, or sale of such drug before the expiration of the patent referred to in the certification. Such notice shall include a detailed statement of the factual and legal basis of the applicant's opinion that the patent is not valid or will not be infringed.

(iii) If an application is amended to include a certification described in subparagraph (A)(vii)(IV), the notice required by clause (ii) shall be given when the amended application is submitted.

21 U.S.C.A. §355(j)(2)(A)-(B) (West 1999).

APPENDIX E — U.S. PATENT NO. 5,264,446, ISSUED NOVEMBER 23, 1993

(Omitted here but printed separately as Lodging Appendix)